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Baltimore. Mayor.

The mayor's message +

REPORTS

OF THE

City Officers and Departments

MADE TO THE

CITY COUNCIL OF BALTIMORE

FOR THE YEAR 1913

1797

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER

1914

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Water Engineer.

267390

THIRD
ANNUAL MESSAGE

1913-1914

JAMES H. PRESTON

Mayor of Baltimore

ISSUED JUNE, 1914

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER
1914

THIRD ANNUAL MESSAGE

Gentlemen of the City Council:

I have the honor, in accordance with the terms of the Charter, to submit herewith to you my third annual report.

The immediate finances of the city are in excellent condition. We have a balance in bank for the completion of the work for the year 1914, as of June 1 this year, of $6,791,999.40, upon which we are being paid interest by the banks at the rate of 2¼ per cent. and in some instances 3 per cent.

The following is a statement of the gross and net debt of the city, not including the physical assets, such as the City Hall, Court House, Public Schools, Parks, etc.:

The gross debt of the city, as of December 31, 1913, is		$79,418,304 50
Sinking funds, face value	$26,036,750 17	
Water works, stock outstanding	11,100,000 00	
Electrical conduits, stock outstanding	3,375,000 00	
Docks and piers, stock outstanding	6,105,000 00	
Turnpike stock	412 50	
Total		46,617,162 67
Leaving a net debt of		$32,801,141 83

There has been an increase in the funded debt of the city for the year 1913, by the sale of city stock, to the amount of $8,125,000.

I desire to call special attention to the rapidly increasing gross and net debt of the City of Baltimore, and to say a word of caution against any extension or increase in this debt, except that which is absolutely necessary to finish the sewerage system now nearing completion.

Any other increase in the city's debt I deem unwise until the present authorized issues have been expended, the sewerage system has been completed, and we can see more clearly our ability to sell stock profitably and to pay interest and sinking fund without an undue burden on the tax-payer.

It must be borne in mind that the interest and sinking fund, amounting, approximately, to 5 per cent. per annum, must be carried in the tax rate. For example: On the sale of $7,000,000 of city stock in the year 1914, an annual expenditure of approximately $350,000 is entailed, and this must be added to the amount expended in 1915.

In addition to this the stimulation of the city's activities necessitates an unavoidable increase in the overhead charges, which cannot be maintained upon a level with the former year, however strenuously the city authorities may work to that end.

It is safe to say, therefore, that at least $500,000 more must be appropriated for 1915 than was necessary in 1914.

This additional burden added to the already heavy liability of the tax-payer presents a difficult problem. The basis must be increased, the rate must be raised, or new sources of revenue must be discovered.

I therefore strongly urge that no additional bond issues be authorized beyond that for the completion of the sewerage system, until the stock now in the city treasury, and which must be sold under the mandate of the people, is disposed of.

There remains in the treasury, to be issued, the larger part of which will have to be issued in 1915, the sum of $9,865,000.

This will entail an additional charge of about $450,000 per annum, which must be borne as I have indicated above, when all the present authorized loans shall have been issued.

I desire to congratulate the people of Baltimore upon the successful outcome of the session of the Legislature for 1914.

We obtained $600,000 for the City of Baltimore for paving, and an appropriation of $1,000,000 for the construction of a new Light Street Bridge in Anne Arundel and Baltimore counties, but immediately adjacent to Baltimore city.

We were successful in obtaining the repeal of the tax on stocks of municipal corporations, which amounted to upwards of $100,000 a year and is a capitalized saving of over $2,000,000 for Baltimore city.

We were enabled to require the United Railways, occupying area in the streets of Baltimore, to pave within that area and giving the city authorities control of the method and construction of the paving in the railway area. This, it is estimated, is worth $1,500,000 to the tax-payers.

A fuller and more detailed account of the legislation obtained by the city in the session of 1914 will be found set out in the report of the City Solicitor, a part of which is incorporated herein.

FINANCIAL.

The City Comptroller's books, which are the general books of the city government, indicate that a balance of $2,641,771.52 was brought forward from 1912's accounts, which, with receipts of $23,378,116.70 by 748 receipt warrants, made the total receipts of the city for the year 1913 $26,019,888.22, and during 1913 a total of 19,391 pay warrants were issued, representing an expenditure of $24,381,195.65, leaving on December 31, 1913, a balance of $1,638,692.57 to be carried forward to 1914. which balance has been charged against the City Register, and duly verified by the City Comptroller, by cash in the City Register's office and certified balances in depository banks.

This balance of $1,638,692.57 is largely made up of unexpended appropriations for 1913 and previous years.

The surplus, arising by reason of excess of income received from the estimated revenue over the expenditures and becom-

Note—Anyone specially interested in the city legislation will find full information set out in the report of the City Solicitor, which can be had upon application to his office, either by postal or in person.

ing part of the general revenue of the city for the current fiscal year, was estimated by the Board of Estimates at $733,557.20, and this amount was taken into consideration by the Board of Estimates in the preparation of the tax levy for 1914.

The estimated amount necessary for the maintenance of the city government and the cost of new improvements for the year 1914, as appropriated by the Ordinance of Estimates for the year 1914, is $22,432,349.92.

The estimated receipts from licenses, fees, rents and all other charges, including the amount believed to be collectible from taxes in arrears and also from taxes at fixed rates for the year 1914, total $15,104,923.84. Amount to be raised by taxation at full rate is $7,327,426.08.

Estimating 83 per cent. collectible on $445,869,908, this representing property assessable at full rate, or $370,072,024. The Board of Estimates, on November 26, 1913, stated a tax rate of $1.98 per $100 for the fiscal year 1914 would be necessary to produce the difference between the anticipated expenditures and receipts of the city, the product of the same being $7,327,426.08.

Following will be found a list of appropriations for the year 1913, from which the year's operations were carried on:

SUMMARY OF APPROPRIATIONS FOR 1913.

DEPARTMENTS.	Total, 1913.	From Levy, Etc.	From Loans.
Appeal Tax Court	$69,885 00	$69,885 00	....
Board of Fire Commissioners	1,128,569 32	1,128,569 32	....
Board of School Commissioners	1,972,564 55	1,972,564 55	....
Board of Police Commissioners	1,314,178 50	1,314,178 50	....
Board of Police Examiners	6,102 00	6,102 00	....
Board of Park Commissioners	756,411 27	637,000 00	$119,411 27
Collector of Water Rents and Licenses	469,775 00	469,775 00	....
Courts	323,134 11	323,134 11	....
City Register	2,871,124 75	2,871,124 75	....
City Collector	80,755 00	80,755 00	....
City Librarian	29,172 00	29,172 00	....
City Engineer	539,813 97	539,813 97	....
Commissioners for Opening Streets	1,111,877 48	111,877 48	1,000,000 00
Commissioner of Health	218,415 00	218,415 00	....
Commissioner of Street Cleaning	822,658 22	822,658 22	....
Comptroller	54,050 00	54,050 00	....
Diary City Council	59,685 00	59,685 00	....
Department of Legislative Ref.	3,690 00	3,690 00	....
Electrical Commission	527,900 00	10,700 00	517,200 00
Free Public Bath Commission	77,453 00	77,453 00	....
Harbor Board	281,359 00	112,291 00	169,068 00
Inspector of Buildings	538,060 00	459,060 00	79,000 00
Liquor License Commission	16,600 00	16,600 00	....
Law Department	47,800 00	47,800 00	....
Mayoralty	19,848 00	19,848 00	....
Municipal Factory Site Commission	11,000 00	11,000 00	....
Miscellaneous Annual Appropriation	44,260 00	44,260 00	....
Miscellaneous Gen. Expenditures	140,058 00	140,058 00	....
Paving Commission	1,000,000 00	....	1,000,000 00
Reformatories	130,440 00	130,440 00	....
Supt. of Lamps and Lighting	463,533 41	463,533 41	....
Supervisors of City Charities	563,546 00	563,546 00	....
Supervisors of Elections	135,971 00	135,971 00	....
Supt. of Public Buildings	81,775 00	81,775 00	....
Sewerage Commission	3,023,927 00	....	3,023,927 00
Sinking Funds	989,002 83	989,002 83	....
Topographical Survey	15,275 00	15,275 00	....
Visitors to the Jail	63,550 00	63,550 00	....
Water Department	3,409,650 00	798,890 00	2,610,760 00
Total	$23,412,869 41	$14,893,503 14	$8,519,366 27

The detailed report of the expenditures of the city by the foregoing departments are set out fully in the report of the City Comptroller, and also in the individual reports of the various departments. Any of these reports may be had upon application to the various department heads, or to the City Librarian.

APPEAL TAX COURT.

Taxable Basis of the City of Baltimore for 1914.

Real estate (full city rate)		$352,681,639
Real estate (full city rate) estimated additional		750,000
Real estate (suburban rate)		19,613,033
Real estate (suburban rate) estimated additional		150,000
Real estate (rural rate)		26,887,154
Real estate (rural rate) estimated additional		100,000
Personal—Individuals, firms and foreign corporations	$49,347,004	
Less plant exemption	4,808,735	
		44,538,269
Maryland incorporated companies (estimated)	53,475,114	
Less plant exemption	6,475,114	
		47,000,000
Distilled spirits in bond (estimated)		900,000
Securities (30 cent rate)		191,970,999
Securities (30 cent rate) estimated non-stock corporations.		1,100,000
Deposits in savings banks (estimated) (18¾c. rate)		96,000,000
Total taxable basis		$781,691,094

The taxable basis for 1914 shows an increase over that of 1913 of $39,781,782, a most creditable showing. The increase of $17,000,000 in the full rate real estate class represents an addition of more than 5 per cent. over same item last year. The increase in New York in this class of assessments last year was less than 2 per cent., while Chicago gained only about 1 per cent.

COMPARATIVE STATEMENT OF DEPARTMENTAL APPROPRIATIONS, WITH THE FULL ASSESSABLE BASIS AND THE TAX RATE FOR THE YEARS 1901-1914.

	DEPARTMENTS.	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914.
1.	Appeal Tax Court	$26,725 00	$25,225 00	$24,875 00	$165,525 00	$56,449 97	$33,525 00	$33.325 00	$43,925 00	$178,750 00	$68,805 00	$60,450 00	$60,850 00	$69,885 00	$136,375 00
2.	Board of Fire Commissioners	496,100 00	496,030 00	590,250 00	564,170 00	622,760 00	765,495 00	896,610 00	1,294,685 00	1,582,289 40	1,151,734 00	978,840 84	1,089,780 00	1,128,509 32	1,034,135 00
3.	Board of Park Commissioners	302,675 00	398,650 00	353,168 00	457,000 00	524,800 00	1,472,617 59	1,480.945 82	1,031.323 35	658,178 80	567,255 73	626.800 04	549,737 05	756,411 27	710,281 10
4.	Board of Police Commissioners	1,014,440 00	999,661 00	1,011,339 00	1,074,874 00	1,091,763 16	1,088,017 05	1,223,532 33	1,212,049 66	1,279,453 30	1,282,922 23	1,278,891 89	1,272,121 26	1,314,178 50	1,297,760 86
5.	Board of Police Examiners	5,032 00	4,482 00	6,182 00	5,482 00	5,482 00	5,442 00	5,377 00	5,352 00	5,667 00	5,697 00	5,712 00	6,102 00	6,102 00	6,102 00
6.	Board of School Commissioners	1,226,146 28	1,275,522 00	1,552,365 01	1,573,281 26	1,476,607 28	1,786,983 28	1,890,124 16	2,168,805 81	2,132,525 00	1,951,976 75	2,836,652 75	2,103,137 75	1,972,564 55	2,120,388 00
7.	City Collector	34,300 00	334,735 86	34,500 00	36,270 84	35,375 00	37,750 00	42,250 00	37,750 00	38,100 00	39,600 00	42,491 00	76,268 00	80,755 00	89,202 00
8.	City Engineer	288,230 00	529,226 75	304,620 00	411,044 34	580,110 00	736,492 24	508,820 25	601,168 93	855,551 34	682,050 67	653,716 05	602,239 23	539,813 97	646,063 42
9.	City Librarian	18,418 40	17,919 89	17,350 83	17,399 32	18,265 78	17,438,72	23.407 24	20,128 07	30,145 88	27,020 00	27,215 00	27,515 00	29,172 00	31.307 00
10.	City Register	1,681,406 18	1,647,210 84	1,606,277 96	1,612,421 57	1,734,342 31	1,782,376 00	1,849,168 03	2,132,972 00	2,147,464 00	2,300,413 50	2,489,303 50	2,638,496 30	2,871,124 75	3,188,295 28
11.	Collector of Water Rents and Licenses	404,900 00	404,900 00	410,111 00	411,031 84	440,925 00	443,725 00	448,075 00	445,045 00	481,075 00	482,877 00	463,229 35	463,575 00	469,775 00	469,775 00
11½	Commission on City Plan											500,000 00			
12.	Commissioners for Opening Streets	26,714 68	10,234 88	7,072 00	6,971 00	6,971 00	506,971 00	504,900 00	517,608 56	507,400 00	71,985 55	124,502 14	1,011,460 81	1,111.877 48	1,073,354 07
13.	Commissioner of Health	84,907 80	88,200 00	88,295 00	91,071 80	98,667 00	152,927 00	123,575 00	154,380 00	149,380 00	174,872 50	223,365 84	203,105 00	218,415 00	242,190 00
14.	Commissioner of Street Cleaning	380,748 33	362,990 00	378,279 76	427,502 34	456,764 00	523,857 84	555.514 84	767,579 03	720,800 00	768,660 00	883,676 00	822,658 22	822,658 22	834,878 22
15.	Comptroller	24,350 00	50,828 00	35,620 96	24,732 10	36,630 78	31,650 00	27,850 00	42,980 00	53,050 00	47,830 00	57,946 65	49,700 00	54,050 00	57,382 00
16.	Courts	201,773 90	194,730 90	198,479 85	197,944 90	214,488 66	212,078 15	216,465 15	220,103 15	235,903 25	227,816 60	240,240 26	235,518 10	323,131 11	284,904 85
17.	Department of Legislative Reference							3,200 00	3,710 00	3,510 00	3,630 00	3,630 00	3,690 00	3,690 00	3,690 00
18.	Diary City Council	54,973 00	55,585 00	55,585 00	56,105 84	55,585 00	58,875 00	58,056 48	59,085 00	62,085 00	59,085 00	59,085 00	63,447 00	59,685 00	59,185 00
19.	Electrical Commission	193,079 75	140,042 74	222,786 22	197,395 84	193,344 00	195,396 00	237,396 00	214,378 48	243,396 00	391,596 00	238,476 00	229,000 00	527,900 00	530,523 00
20.	Free Public Bath Commission	12,846 00	14,449 00	17,124 00	19,878 26	21,712 00	29,561 00	61,825 00	48,362 00	80,397 00	58,716 00	64,110 00	88,599 00	77,453 00	81,302 00
21.	Harbor Board	77,430 00	74,867 00	77,012 00	65,677 00	114,117 00	1,124,917 00	419,847 00	1,017,546 73	434,758 00	656,264 00	1,120,955 67	1,157,959 00	281,359 00	191.939 00
22.	Inspector of Buildings	197,923 00	508,047 00	235,707 39	242,309 01	313,532 57	567,268 00	361,216 41	378,000 00	617,262 00	429,051 18	846,705 33	391,666 18	538,060 00	329,260 00
23.	Law Department	33,800 00	24,300 00	25,300 00	25,800 00	33,200 00	40,200 00	52,231 98	44,243 19	56,017 50	49,600 00	50,345 82	48,000 00	47,800 00	47,800 00
24.	Liquor License Commission	14,570 65	14,919 50	14,919 50	15,113 50	15,719 96	16,700 00	16,200 00	16,200 00	19,233 33	18,100 00	17,400 00	17,400 00	16,600 00	17,635 00
25.	Mayoralty	11,900 00	15,602 00	17,400 00	12,583 34	15,787 14	14,218 00	16,461 74	14,848 00	14,848 00	49,848 00	23,598 00	14,848 00	19,848 00	19,848 00
26.	Miscellaneous Annual Appropriations	10,000 00	10,000 00	41,020 20	24,375 00	22,915 80	13,825 00	27,520 00	75,582 49	29,523 00	60,225 00	41,500 00	40,260 00	44,260 00	180,360 00
27.	Miscellaneous General Expenditures	72,160 00	61,760 00	69,753 00	71,788 00	74,072 00	72,047 00	72,493 15	82,166 00	86,503 00	103,662 00	132,033 55	138,858 00	140,058 00	205,941 00
28.	Municipal Factory Site Commission												6.000 00	11,000 00	11,000 00
29.	Paving Commission											500,000 00	1,000,000 00	1,000,000 00	1,000,000 00
30.	Reformatories	48,000 00	68,000 00	74,500 00	75,500 00	83,151 00	87,722 00	196,422 00	121.777 00	152,677 00	130,983 00	121,923 00	122,380 00	130,440 00	131,180 00
31.	Sewerage Commission						1,000,000 00	3,681,540 00	2,835,531 00	2,381,321 00	1,427.222 00	1,725,312 00	4,596,881 00	3,023,927 00	1,864,923 00
32.	Sinking Funds	507,591 89	512,980 82	513,010 14	479,355 17	527,634 91	620,865 34	667,957 11	858,225 33	717,822 51	733,939 67	769,780 50	948,271 07	989,002 83	971,867 00
33.	Superintendent of Lamps and Lighting	348,685 00	341,222 00	336,689 11	333,547 28	311,784 60	275,555 74	278,873 61	314,400 52	346,500 00	364.465 27	374,094 29	395,839 98	463.533 41	542,268 05
34.	Superintendent of Public Buildings	72,410 00	80,368 65	81,135 00	88,323 96	84,195 00	87,445 00	86,080 95	104,614 80	92,715 00	93,615 00	103,283 33	88,900 00	81,775 00	82,360 00
35.	Supervisors of City Charities	321,720 00	339,995 00	412,850 00	388,005 17	399,029 67	429,233 00	449,700 00	450,972 44	537,750 00	591.709 00	474,684 00	572,118 00	563,546 00	607.194 75
36.	Supervisors of Elections	127,300 00	88,286 00	170,198 00	116,995 00	138,753 00	119,203 00	221,325 00	163,401 00	138,421 00	152,928 50	213,745 00	156.003 00	135,971 00	174.637 00
37.	Topographical Survey Commission	6,155 00	6,120 00	6,270 00	6,523 75	11,250 00	11,770 00	11.770 00	12,970 00	12,735 00	12.270 00	14,280 00	13,995 00	15,275 00	35.075 00
38.	Visitors to the Jail	68,330 00	58,080 00	54,080 00	53,416 67	55,480 00	58,080 00	91,080 00	62,920 00	62,920 00	63,889 00	65,150 00	64,150 00	63,550 00	64,550 00
39.	Water Department	543,200 00	533,698 07	1,102,430 00	793,310 25	968,401 91	585,624 00	807,160 00	1,190,152 64	2,169,875 00	1,794,320 00	2,857.067 00	2,209,510 00	3.409.650 00	3,057.358 32
	Total	$8,938,941 86	$9,788,869 90	$10,146,555 93	$10,142,725 35	$10,840,067 50	$15,005,850 95	$17,648,296 25	$18,765,002 18	$19,316,002 31	$17,116,635 15	$21,310,281 80	$23.580,038 95	$23,412,869 41	$22.432.349 92
	Full assessable basis	$402,816,097 00	$431,082,122 00	$440,153,153 00	$491,921,328 00	$503,144,182 00	$548,522,063 00	$595.791,882 00	$624,482,590 00	$655,401,372 00	$682,633.316 00	$698,135,168 00	$723.800,340 00	$741,909,312 00	$781.691.094 00
	Tax rate	$1.81½	$1.95	$1.8675	$2.06	$2.11½	$2.00	$1.97½	$2.00	$1 95	$1.99	$1.98	$1.89	$2.01	$1.98

PAVING COMMISSION.

Paving operations in Baltimore have been vigorously carried on during the past year.

Fayette street, from Gay street to eastern city line, has been repaved. Eastern avenue is now partly under contract and the remainder will be put under contract this year. This will give another through street paved with improved material from Jones Falls to the eastern city limits.

Fort avenue has been paved all the way down to Fort McHenry. This is a much-needed improvement and will give a fine driveway to the North German Lloyd steamers and also to Fort McHenry, where we will hold our "Star-Spangled Banner" celebration this summer.

Linden avenue, from North avenue to Richmond Market, is another important thoroughfare which was paved last year.

The foregoing are only a few of the more important streets which have been improved in the last year. The total number of streets on which the Paving Commission carried on operations was one hundred and eleven, which, added to the seventy-six streets (some completely and others partly) improved during 1912, makes the total number of streets or sections thereof amount to one hundred and eighty-seven since the beginning of the operations of the Paving Commission in November, 1911.

As will be seen from the following table, there were laid in 1913, 555,499 square yards of improved paving, or 31.56 miles; while in 1912 there were 375,521 square yards, or 21.34 miles laid; making a total of 931,020 square yards, equal to 52.9 miles.

TABLE A.

STATUS OF THE WORK OF THE PAVING COMMISSION FROM NOVEMBER 11, 1911, TO DECEMBER 31, 1913.

PAVING MATERIALS.	PAVING COMPLETED.					
	Square Yards Paving.			Miles, Average Thirty Feet Wide.		
	1912.	1913.	Total.	1912.	1913.	Total.
Sheet asphalt	216,444.96	212,472.24	428,917.20	12.30	12.07	24.37
Bituminous concrete	16,353.29	62,517.17	78,870.46	.93	3.55	4.48
Vitrified block	96,108.03	170,697.43	266,806.47	5.46	9.70	15.16
Granite block	41,924.78	95,899.89	137,824.67	2.38	5.45	7.83
Granite block repaving, new, concrete base	975.16	7,380.93	8,356.09	.06	.42	.48
Wood block	3,715.25	6,529.84	10,245.09	.21	.37	.58
Totals	375,521.47	555,498.51	931,019.98	21.34	31.56	52.90

Seven and one-half miles of the paving started last year were uncompleted at the end of the year, but have since been completed.

The total expenses, including salaries, for 1913 were $1,527,653.79.

Administrative expenses, construction salaries, testing materials and salaries of four clerks in Appeal Tax Court for collection of paving tax amount to about 5 per cent. of the total amount expended.

The streets in Northeast Baltimore have been pretty generally improved. Some of the streets in Southeast Baltimore and a number of streets in West and Northwest Baltimore will be improved during this year as soon as they can safely be laid after the sewers are completed.

TABLE B.

AVERAGE COST OF PAVING PER SQUARE YARD DURING 1913.

Sheet asphalt, 1½" topping, 1½" binder, and 5" concrete base..	$1 57
Sheet asphalt, 1" topping, 1½" binder, and 6" concrete base...	1 55
Sheet asphalt, 1½" topping, 1½" binder, and 6" concrete base..	1 67
Sheet asphalt, 1½" topping, 1½" binder, and 6" concrete base (railway)...	1 80
Sheet asphalt, 2" topping, 1½" binder, and 6" concrete base....	1 78
Sheet asphalt, 1½" topping, 1½" binder, and 8" concrete base...	1 89
Bituminous concrete, 2" surface, 4" concrete base, and sealing coat	1 30
Bituminous concrete, 2" surface, 6" concrete base, and sealing coat	1 51
Vitrified block, cement filler, 6" concrete base................	2 24
Vitrified block, cement filler, 6" concrete base (railway)......	2 30
Hillside vitrified block, cement filler, 4" concrete base..........	2 14
Hillside vitrified block, cement filler, 6" concrete base........	2 28
Granite block paving, cement filler, 6" concrete base..........	3 39
Granite block paving, cement filler, 6" concrete base (railway)..	3 56
Granite block paving, bituminous filler, 6" concrete base......	3 62
Wood block paving, sand filler, 6" concrete base..............	3 05
Wood block paving, sand filler, 6" concrete base (railway)...	3 05
Wood block paving, bituminous filler, 6" concrete base (railway)	3 25
Granite block redressed and repaved, cement filler, 6" concrete base..	2 60
Granite block redressed and repaved, bituminous filler, 6" concrete base..	2 58
Granite block redressed and repaved, bituminous filler, 6" concrete base (railway)..................................	2 35

SEWERAGE COMMISSION.

The Sewerage Commission in 1913 spent $3,875,000. One hundred and thirty-nine miles of sewers, drains and house connections, varying in size from five inches to twenty-nine feet, were laid, and 1,541 catch-basins installed.

The construction of the Jones Falls Conduits, from a point one hundred feet south of Baltimore street to the chamber at the entrance to the tunnel between Biddle and Chase streets, has been completed. This work, 5,484 feet long, redeems 428,300 square feet of land in the center of the city, eliminates ten street bridges and one double-track railroad bridge; and, in addition, makes possible the redemption of 175,000 additional square feet of land and the elimination of two additional railroad bridges. This was a most difficult piece of work—in the bed of a running stream with a good many sudden floods.

The big 29-foot tunnel, diverting the Falls from in front ot Union Station, is about 75 per cent. completed. This is the biggest drainage tunnel in the world. The construction of this tunnel effected a large saving in eliminating the long bend in the Falls, shortening the construction about seven hundred feet and giving a large quantity of excellent rock from the tunnel for the concrete necessary in the construction, thus securing a much lower contract price for the work.

The three 27,500,000-gallon pumps at the Sewerage Pumping Station, which were put in operation by me on January 31, 1912, have worked in a most perfect manner, the Sewerage Engineer reports, and were one of the means of relieving our harbor of the bad odor that it had had for years.

Extensions have been made to the Disposal Plant at Back River and there are now over 30,000 houses connected with the sewers and draining to this plant.

The contract for the Fallsway Viaduct, to raise the driveway over the Falls from Madison street to the intersection of Eager street, Chase street and Guilford avenue, and over the crossing of the Northern Central Railway Company, was awarded last year, and will be completed this summer. The contract price is $190,693.15. This covers the superstructure over the roof of the conduits. Foundations for the viaduct were constructed in the roof of the conduits at a cost of $25,000.

HEALTH.

The wide publicity given the comparatively small number of cases of smallpox has been detrimental to the city's hotel and business interests. Many business men from other cities, about to visit Baltimore, either have deferred their visits or gone to other cities.

The new home for the superintendent at Sydenham has been completed and is an attractive addition to the group of buildings at Sydenham. The new hospital unit at this point is now under construction.

Additional milk and dairy inspectors were appointed last year and the milk situation is now said to be improved.

The examinations of the water at Loch Raven and Lake Roland were continued through the year and the water found of good quality.

Food inspections at the wharves, markets, stores, abattoirs, slaughter houses and bakeries were carried on as usual, with the result that 656,927 pounds of foodstuffs and 634 carcasses of cattle, sheep, hogs and calves were condemned.

During the year 16,536 properties were connected with the sanitary sewers.

CITY ENGINEER.

Under the supervision of the City Engineer the Fallsway, between Baltimore and Bath streets, has been paved and opened to traffic; and the second section, between Bath and Madison streets, is now under contract and nearing completion, as is also the viaduct.

The first section of the Key Highway, the new waterfront street, has been paved and is now open to the public.

Edmondson avenue, from Gwynn's Falls to the western city line, has been paved with bituminous concrete. Charles Street avenue, from University Parkway to Stratford road, has been parked and repaved. Pratt street, from President street to Central avenue, has been widened and paved. Ellicott street, from Pratt street to Lombard street; Hollingsworth street, from Lombard street to Pratt street; and St. Paul street, from Lexington street to Franklin street, have been repaved.

The Ostend Street Viaduct over the Baltimore and Ohio Railroad has been completed and opened to traffic, and Ostend street has been repaved to Ridgely street, making a complete connection of improved paving from Charles street to Ridgely street; and the Lee Street Viaduct has also been completed. Both these viaducts were completed within a year.

The question of putting down concrete sidewalks by the property-owners is one which should be fairly dealt with by the general public. Objection is often raised by the property-owners to this requirement. When the city puts down an improved street paving, and thus adds to the value and appearance of the properties along the street, the property-owner should not object to contributing his share toward a greater improvement in putting down a concrete sidewalk. It not only adds to the value and appearance of the property, but is really a matter of economy, because a concrete sidewalk properly laid will last a lifetime.

The city now has its own garage for the storage and repair of its automobiles and is enabled to effect a big saving in the cost of storing cars and the purchase of supplies. The garage is located in the basement of the old Polytechnic School on Courtland street.

COMMISSIONERS FOR OPENING STREETS.

There were more street openings completed and more paving done in the Annex in the last two years than was done by previous boards during the twenty years preceding. This is an accomplishment and a display of energy which I desire especially to commend.

A great number of specially important street openings were gotten through in the past year.

Chief among these is Hilton street (formerly called Eleventh street), running from the Frederick road north to Edmondson avenue, thus giving a much-needed thoroughfare north and south between these two important avenues. The grading has been completed, necessitating in one place a fill of thirty-seven feet, and the paving will be under way in the near future.

Other important street opening and widening proceedings accomplished during the past year are: Twenty-fifth street, from Greenmount avenue to Harford road; Belair road, from North avenue to the eastern city limits; Green Spring Parkway; Woodberry avenue, west from Railroad avenue; Ostend street, from Howard street to Plum alley; Aisquith street, between Baltimore and Fayette streets, converting what was formerly practically nothing more than an alley into a wide, modern thoroughfare; Hillen street, between the Fallsway and High street, will relieve the congestion now there. The Key Highway, the new waterfront street, was condemned and opened by this Department. Covington street, between Ostend and Gittings streets, has been opened and is now being graded and paved.

Sixty-two streets, or sections of streets, were paved by this Commission during the past year, covering a total of 121,180 square yards, or about 6.5 miles, of varying widths.

More beneficial legislation was obtained by the city from the Legislature of 1914 than was ever obtained from any Legislature in Maryland before.

There were twenty-five Acts passed by the Legislature of especial interest to the City of Baltimore. The more important of these are:

To compel railroad and railway companies to pay for new paving in railway area. This, it is estimated, will be worth $1,500,000 to the tax-payers of Baltimore.

Exempting city stock from taxation by the State. This will mean a saving of considerably more than $100,000 a year.

Requiring all purchases of property by every department of Baltimore city, exceeding $500, to be approved by the Board of Estimates. This will effectually prevent any municipal department from entering into any such bargain as the "Warren Deal."

Providing for the consolidation of the engineering departments of the city by creating a chief engineer and making him the final arbiter of all disputes between the various departments. This measure will prevent the inconvenience and annoyance to the public and the useless expense of frequently tearing up the streets and the duplication of other work by the various departments. This Act also makes the City Surveyor a sub-department under the chief engineer at an annual salary of $3,000, thus abolishing the fee system, so far as it relates to that office.

Providing for more speedy procedure for the opening of streets.

Enlarging the powers of the Appeal Tax Court. Improving the method of collecting taxes and, at the same time, abolishing the 3 per cent. penalty and the $3.50 Surveyor's charge for taxes in arrears.

Giving the city authority to decide upon the kind of ballast or foundation under railway ties in the streets.

Carrying out the provisions of the constitutional amendment of 1912, under which property needed for a public improvement may be taken promptly, without waiting for the termination of litigation over the amounts of damages or benefits.

Providing for a new sewerage loan of $3,000,000.

Appropriating $75,000 for "The Star-Spangled Banner" Centennial.

Amending the general condemnation law, which was prepared by the City Solicitor and passed by the Legislature of 1912.

Exempting five hundred dollars' worth of household furniture from taxation.

Relieving the city from the payment of the salaries of the physicians connected with the Bureau of Statistics, thus saving the city $2,500 per year hereafter.

Providing a Bureau of Municipal Liens.

Authorizing the publication of legal advertisements in the *Municipal Journal.*

Authorizing the payment of benefits assessed for opening streets in five annual instalments, which will be of great relief to many persons assessed with such benefits.

The Roads Loan Act, under which the city obtained $1,600,000 for a new Light Street Bridge and for paving in Baltimore city.

THE ROADS LOAN FIGHT.

The fight to obtain the $1,600,000 for a new bridge and paving in Baltimore city was a most bitter one. The State Roads Commission Bill provided for $5,000,000 for the counties and $1,000,000 for Baltimore city. This not only cut down Baltimore city's share to 16⅔ per cent., instead of 20 per cent. which it has received from prior loans, but it gave to certain counties, represented by friends of Senator Smith, very much larger appropriations, in proportion to size, than the Western Maryland counties. This bill was introduced by Mr. Veasey.

After the introduction of the Veasey Bill, I succeeded in inducing the Democratic Advisory Committee, headed by Senator Gorman, to approve a $7,000,000 loan, of which $2,000,000 was for the bridge and for paving in Baltimore city, instead of $1,000,000, for paving alone, as provided in the Veasey Bill. This bill was introduced by Senator Price, who took the precaution to mark the bill "By Request," and who subsequently opposed that bill; and, after the Democratic caucus had been called and failed to come to any agreement, Senator Price drew another bill providing $1,200,000 for a new bridge and paving in Baltimore city.

Our city Delegates and Senators thereupon unanimously agreed that the city would not accept the $1,200,000, but would fight for $2,000,000. This proposition, however, was defeated, but the city finally got $1,600,000.

This result was accomplished entirely by the fight made on behalf of the city by the City Solicitor and the City Delegation in spite of and against the most

"BITTER AND UNFAIR OPPOSITION OF THE 'SUN.'

The following is quoted from the City Solicitors report:

The *Sun* not only tried to prevent the city from getting more than $1,200,000, but did so in the most unfair way. So viciously and unfairly did the *Sun* fight the city in this matter, by cartoons, insinuations and false statements, that it was the subject of comment in the circulars of the leading banking house of Nelson, Cook & Company. In their circular of March 28, 1914, they say:

> The *Sun* has waged a most persistent opposition to the efforts of our city administration to obtain for Baltimore city as large an amount as possible to be expended on improved roads and pavements in the city limits. If to its efforts is due the failure of the city to receive $1,000,000 for street paving and to have only $200,000 allotted for these purposes, the *Sun* is welcome to any satisfaction it may get out of it, but in the final analysis the result has been, as we view it, that the course pursued by the *Sun* in this matter has not been advantageous to the City of Baltimore or its people.

'SUN' FOUGHT THE CITY ON OTHER MEASURES.

On every measure of importance to the city the *Sun* stood against the City of Baltimore. It fought, by editorial and cartoon and news column, the effort to have a fair Senatorial primary by which a Democrat's vote in Baltimore would count as much as it does in one of the counties. It fought the effort to extend the city's limits. It viciously fought the bills which were passed for improvement in the proceedings for opening streets.

When a hearing was held before the Legislative Committees on the bill to compel the United Railways to pay for paving in the railway area, the *Sun* gave three-quarters of a column to the argument of Mr. Robert Crain for the railway company, and very little space to the Mayor and the City Solicitor and the Chairman of the Paving Commission, who spoke on behalf of the city, and headlined the discussion as though the city was trying to do something unfair and was trying to break its contract. The headlines were (*Sun*, February 11, 1914):

PLEADS FOR FAIR PLAY

Robert Crain Presents United Railways
Side of Paving Case.

WANTS CONTRACTS OBSERVED

Mayor Preston and City Solicitor Field
Urge Bill Requiring Paving Between
the Tracks.

The *Sun* even tried to stir up opposition to the bill to repeal the tax on city stock.

In the *Sun* of February 20, 1914, the possible defeat of this bill was heralded as follows:

> Apparently there are breakers ahead for the bill, *fathered by Mayor Preston,* which exempts all State, county and municipal securities from State taxation. * * * Heretofore on numerous occasions efforts

have been made to secure legislation which would exempt city stock from the payment of State taxes, but always the counties have interposed objections—a fact which today led one of the city Senators to remark that the whole aim of the counties seems to be to hold the city up for everything possible.

This Act, which will save the tax-payers of Baltimore more than $100,000 per year, was an act of simple justice to Baltimore city.

NO EXCUSE FOR 'SUN'S' OPPOSITION.

When persons from the counties opposed the mass vote, and the extension of the city's limits and giving a fair amount of the Roads Loan to Baltimore city, they had at least an excuse for their opposition. They believed, or pretended to believe, that it is necessary for the protection of the rights of the counties to refuse full and equal rights to Baltimore city for fear that the city, if it once obtained the power, would do to the counties what the counties have been doing to the city.

But there is no excuse for a newspaper located in and deriving the bulk of its revenues from Baltimore city to oppose the growth of the city by the extension of its boundaries, to oppose a fair primary in which a city man will have an equal vote with a county man, or to oppose getting a fair share of the Roads Loan for Baltimore city.

Charles H. Grasty's fight against Baltimore is simply a production in real life of the fable of the frozen snake which a man took into his bosom and warmed into life, and which with its venomous tongue stung the breast that had nourished it. There was no excuse for the snake biting the bosom that had warmed it. It simply did so because it was a snake.

ACTS PASSED SUBSTANTIALLY AS PRESENTED BY CITY SOLICITOR.

Of the twenty-five Acts above mentioned, twenty-one were prepared by the City Solicitor and passed as administration measures. All of these Acts were passed practically as drawn by the City Solicitor. No amendments were made to any of them, other than minor amendments agreed to and prepared by the City Solicitor, except the amendment to House Bill No. 83, which was prepared by Mr. Hall and which struck out the provision ratifying the market ordinance. The adoption of this amendment was exultantly given large space in the *Sun* as a defeat of the administration.

Since the adjournment of the Legislature the Court of Appeals has decided that the market ordinance is valid throughout, so that it turns out that it was entirely unnecessary to have the ordinance ratified by the Legislature, and the Grasty-Hall victory over the administration proves to be a barren one.

LEGISLATURE GAVE THE CITY PRACTICALLY EVERYTHING ASKED FOR, EXCEPT THE BOROUGH BILL.

The only measures of any importance to the city which failed to pass were the Borough Bill and the bill to require the Gas Company to lay its pipes ahead of the new paving.

The bills giving the Mayor the power to appoint the Police and Liquor License Boards were party measures rather than administration measures and ceased to be of any particular importance after your public announcement that you did not wish them to go into effect until May, 1916, since another Legislature will meet in January, 1916. It was, of course, always recognized that it would be very difficult to secure the passage of the Borough Bill; and the bill relating to the Gas Company was not so important, because the city practically has that power under the present law.

Your administration obtained from the Legislature of 1914 more beneficial legislation for Baltimore city than was ever obtained from any Legislature before. Notwithstanding this unparalleled record of achievement in the Legislature of 1914, the following unvarnished lie was published in the *Sun* of April 7, 1914:

> The administration has failed on nearly all the really big bills which it hoped to pass, especially those bills which were calculated to increase its power, and which were so close to its heart."

SUMMARY OF THE WORK OF THE LAW DEPARTMENT FOR 1913.

Two hundred and twenty-one written opinions were prepared and sent to the various departments of the city.

Fifty-eight ordinances and resolutions were prepared by this Department.

One hundred and seventy-six ordinances and resolutions were examined for the Mayor's approval.

Two hundred and twelve cases were instituted against the city during 1913, in which pleadings were filed and other proper attention given by this Department.

Fourteen cases in the Court of Appeals were argued orally, and briefs prepared and filed therein.

One hundred and thirty-eight cases were tried, or otherwise disposed of, in the lower courts during the year.

Fifty-four suits were brought in the courts by the city upon tax bills. This does not include a large number of suits for taxes brought in the People's Court.

Twenty-six proceedings were instituted in the courts of Baltimore city for the condemnation of property for schoolhouses and other public purposes.

One hundred and twenty-eight claims against the city for damages were examined and passed upon, either settled or refused.

Two hundred and thirty-three appeals from the award of damages or assessment of benefits by the Commissioners for Opening Streets were filed during the year.

Twenty-six appeals from the Appeal Tax Court were filed during the year.

Three hundred and forty-four deeds were prepared and settlements made for damages and benefits involving an amount of $675,045.01, for the opening or closing of twenty-two streets.

Twelve large volumes of abstracts of title for various properties, street opening cases, schoolhouses, etc., were bound during the year.

Two hundred specifications, and seven hundred and sixteen contracts and bonds were examined and passed upon for the work of the various departments.

SCHOOLS.

The handsome new Polytechnic Institute on North avenue, at Calvert street, was completed during the year and is now being occupied. The new sixteen-classroom school to replace the old School No. 6, Ann street near Fleet; new School No. 99, North avenue and Washington street; new School No. 27, Chester and Fayette streets, with twenty-four classrooms, and the new School No. 22, Hamburg and Scott streets, and a three-story building with ten rooms and assembly hall added to No. 99, were all completed during the year and are now being occupied. There are now a total of 161 buildings occupied for school purposes.

These buildings are thoroughly modern in every way and have everything that is necessary for the health, safety and comfort of teachers and pupils.

A tract of land at Catonsville has been purchased for purposes of a parental school, and plans are now being prepared for the buildings to be erected thereon.

The enrollment shows an increase of 3,188 over 1912, the total number entered in 1913 being 85,555 in the day schools and 5,234 in the night classes in 1913, as compared with 4,702 in 1912. The School Board has in preparation plans for the wider use of the school buildings for public lectures, entertainments, etc., in accordance with a general public demand.

The appropriation for school purposes for the year 1913 was $1,857,644.

FIRE DEPARTMENT.

Ten automobile tractors have been added to the equipment of this Department. The repair shop has been equipped with tools to take care of general departmental work.

Rigorous examinations have been made of factories and other buildings, and regulations of building code enforced, resulting in a material reduction of fire hazards. The installation of red electric lights on fire alarm boxes has been extended.

By the addition of one boiler at the High Pressure Pumping Station we have been able to furnish heat, and electricity for light and power for all the public buildings in the central part of the city, thus making a very large saving in these items.

Total appropriation to the Fire Department for 1913 was $1,093,099.01.

INSPECTOR OF BUILDINGS.

Permits were issued in 1913 for the erection of new buildings, additions, alterations, etc., to the value of $16,004,639.80, an increase of $1,525,265.90 over 1912.

Four new schools, the Municipal Garage, and sewer connections with City Hall, Court House, schools, markets and engine houses were completed during the year and the work on the new School No. 83, the Recreation Pier, improvements at Bay View and Sydenham, the grading at the Polytechnic Institute, and numerous other improvements are all being done by this Department and rapidly nearing completion.

Electric motors, boilers, gas and gasoline engines, etc., of an aggregate of 15,000 horsepower were installed during the year 1913.

The Building Code gives the right of appeal from decisions of the Inspector of Buildings in matters pertaining to building construction, and it is gratifying to note that there have been no such appeals in the last year. This is conclusive evidence of the harmonious conditions existing between the Inspector of Buildings and the general public.

WATER DEPARTMENT.

The pitometer survey of what is known as the Western High Service District showed that defective house fixtures were responsible for 60 per cent. of the water leakage; that 20 per cent. was due to broken supply pipes, and the remaining 20 per cent. due to leaks from mains and valves in the street construction.

The new Loch Raven Dam is about 90 per cent. completed, and it is hoped that it will be turned over by the contractor to the city very shortly. The bridges and roads being constructed in the Gunpowder water shed are progressing, and will be entirely completed this summer.

The filtration plant is under contract and in course of construction; it is not, however, being constructed as rapidly as we had hoped.

HARBOR BOARD.

The odors and gases have been eliminated almost entirely from the harbor by the operation of the sewerage system, and this has lessened the dredging of the harbor to an extent of 1,000,000 cubic yards during the past year.

The main channel has been widened ninety feet from below Elevator "C" to a point east of the North German Lloyd pier, 17,856 cubic yards being removed in this operation. The twenty-four foot channel from the main channel into the mouth of Skinner's Dry Dock, and the twenty-foot channel, both ninety feet wide, and the dredging for the Recreation Pier, were all completed last year.

The construction of the sub-structure of the Recreation Pier and the grading and paving of the adjacent streets were completed by the Harbor Board.

DEPARTMENT OF STREET CLEANING.

The Street Cleaning Department has again demonstrated its efficiency by carrying on an increased amount of work with an appropriation of $822,658.22, the same as for 1912, and turning back into the city treasury an unexpended balance of $71,902.55.

The Department last May purchased a 7½-ton automobile garbage truck, at a cost of $5,000, which has proven very satisfactory. This truck carries six cartloads of garbage and relieves long hauls by horses, such as from Forest Park to the scows at Spring Gardens. Baltimore is the first city in this country to us an automobile truck for this purpose. The estimated cost of operating it is about five dollars a day.

During the past year the Department assumed the duty of sweeping and flushing the markets and keeping clean thirty-eight miles of new improved streets, and this has been most effectively done. Wire receptacles for paper and refuse have been placed in all markets, and this has facilitated the work of keeping them clean.

PARK BOARD.

The Park Board during the year completed the purchase of the Bergner property, consisting of thirteen acres, on North avenue. This will make a direct connection via North avenue between Gwynn's Falls and Druid Hill Parks.

Nine properties on Covington street, the back yards of which extended back to Federal Hill Park, have been acquired. These properties, which have been an eyesore for many years, will be razed and converted into playgrounds and tennis courts.

A new concrete bridge costing $16,000 has been erected in Wyman Park.

The Patterson Park addition has been very extensively improved. This addition consists of about ten acres of land, and will be used for baseball, football, etc.

The total appropriation to the Park Board was $756,411.27 for 1913.

The Board now has under its jurisdiction 2,288 acres of land, which are divided into fifty separate and distinct parks and squares.

SUPERINTENDENT OF LAMPS AND LIGHTING.

The extensive paving operations, carried on last year and now being carried on, have placed on this Department the burden of rearranging its lamps, and in a great many cases, installing additional equipment; 1,465 new lamps having been placed in service, bringing the total now in use up to 13,830 lamps of various classes.

The "White Way" lighting system (inaugurated by this administration) has been installed on the Fallsway and extended north on St. Paul street to Centre street. Ornamental lamps have been installed around the Western Female High School, around the Polytechnic Institute, and on the streets surrounding the new Recreation Pier and the Sewerage Pumping Station.

Six thousand two hundred and ninety-seven samples of coal oil were tested and all found to be up to the required legal standard and flashing point of 120 degrees Fahrenheit.

The contract price for gas for street lamps was reduced 2½ cents per 1,000 cubic feet, this making a saving of $4,000 for the year, and $6,000 per year has been saved by the contract for the maintenance and operation of gas and naphtha lamps. All city bridges have been equipped with new and improved lighting systems.

ELECTRICAL COMMISSION.

The Electrical Commission in 1913 laid 1,660,552.90 duct feet of conduits at a construction cost of $503,477.34. There were also constructed 252 manholes, 57 junction boxes, and 466 distributing boxes; 215,138.85 feet of cable were installed. This is the greatest amount of work ever done in any one year in the history of this Department.

The paving operations being vigorously carried on, in a great many instances, necessitated a deviation from the logical system of extending the conduits, but in order to avoid the tearing up of the improved pavements this course is most advisable.

The Department, through its own staff of physicians, gives surgical aid to its employees injured in the service. This surgical attention last year cost $1,182.90, whereas, if employer's liability insurance were carried, it would cost approximately $10,000 a year. Under this plan of surgical aid there has not been one suit against the city for damages out of a total of 198 accidents.

The revenue to the city from the conduit system last year amounted to $120,800.46, and in addition to this return we are eliminating from our street unsightly poles and dangerous overhead wires.

CITY FORESTER.

The Forestry Department is a new institution in Baltimore, and was inaugurated by this administration. Its purpose is to encourage the planting of trees along the highways and to assist and advise in the treatment and care of trees. One thousand trees were planted by the Department last year along boulevards, public drives, around schools, libraries, etc., and 851 permits were issued to private individuals to plant trees, under the supervision of the Department. Two thousand seven hundred permits were issued to private individuals for pruning trees, while 1,500 trees were pruned by the Forestry Department.

In addition to the planting and care of trees, there have been parkings placed along numerous streets, and these also are watered and grass cut by the Department. Three thousand trees were sprayed in an effort to wipe out leaf-eating insects.

Plans have been prepared for a planting plan of the 440 acres of property in the Gunpowder Watershed.

Tree planting and care is a most important phase of city beautification, and with proper co-operation on the part of the public, good results can be obtained.

SUPERVISORS OF CITY CHARITIES.

The new kitchen and dining-room at Bay View, costing $75,000, were completed last year and are now in use. Twelve thousand five hundred dollars was appropriated for a new and modern cow stable and barn. This, also, has been completed during the year and is a creditable addition to the improvements at Bay View.

The new bungalow for the physicians of the Tuberculosis Hospital, costing $5,000, and a sprinkler system and fire doors have been completed, and numerous other repairs and alterations made to the main building at a cost of $29,000.

The total appropriation to the Supervisors of City Charities for the year 1913 was $535,161.34, and this was expended in salaries, expenses at Bay View, new improvements, hospitals, care of insane, etc.

CITY JAIL.

There has been inaugurated at the City Jail a school for men and women confined there. It was found that a great many persons committed to the Jail are unable to read and write and the establishment of a school will be of material benefit to these unfortunates.

During the year 1913 there were 10,079 persons committed to the Jail, while in the same year 10,057 were released. The average daily number of prisoners confined was 571 in 1913, as against 481 for 1912.

TOPOGRAPHICAL SURVEY COMMISSION.

The Topographical Survey Commission continues to co-operate with and exercise supervision over the work being done in the city by the State Roads Commission, thus facilitating the speedy completion of the work.

The Frederick road and the Reisterstown road and Hanover, Cromwell and Lights streets have all been improved by the State Roads Commission with the co-operation and assistance of the Commission.

Plans are being prepared for the opening and improving of a driveway known as Mill road to connect Hampden and Woodberry, and also for the Ellicott Driveway to run along Gwynn's Falls and connect the Frederick road with the Franklin road.

Plans have also been perfected for the final link in the Alameda, so as to make a direct connection between Druid Hill and Clifton Parks; Spring Garden avenue, from Hanover street to Light street; Hamburg street, from Bush street to Stockholm street, and numerous other important street openings and improvements.

The Department has completed the compilation of a new and complete map of the city on a scale of five hundred feet to one inch, and have in course of construction a complete city and property map on a scale of two hundred feet per inch. Each of these maps will be placed on sale to the public.

FREE PUBLIC BATH COMMISSION.

Sixteen public baths, laundries and comfort stations are now maintained. In 1913 there were 1,047,954 patrons at the public baths and laundries, and 861,000 at the two public comfort stations. The fees for the year amounted to $22,229.84, showing an increase in receipts over 1912 of $3,304, and an increase of 156,000 bathers over 1912.

Plans have been prepared for the erection of an additional comfort station near Lexington Market and this is expected to be finished this year.

THE PENNSYLVANIA RAILROAD COMPANY'S TERMINAL PLANS.

The Pennsylvania Railroad terminal situation remains unchanged. I am informed that until after a determination of the application of the railroads for an increase in the freight rates, no plans for the Calvert Terminal can be concluded.

I am also informed that the Pennsylvania Railroad Company is making new plans for the Baltimore terminal, which include electrification in some form.

Plans have been adopted for electrification in Philadelphia; the installation is complete in New York on both lines of the Pennsylvania and the lines of the New Haven as far as Stamford, Conn., a distance of 33 miles, both for switching and direct shipment, and if this were not sufficient proof of the practicability of electrical railroad operation, it will be found in the recent installation of electricity on the lines of the Chicago, Milwaukee and St. Paul Railroad across the Rocky Mountains, a distance of 440 miles. And this for the reason that the railroad found electrical power more economical than steam.

I strongly advise that electrical operation of their freight yards in Baltimore be insisted upon.

FACTORY SITES.

The establishment of factories in Baltimore is largely a question of inducements. It would help us very much if we could have on the water front, near the railroads, sites for factories, where the city might utilize it for the encouragement of manufacturing enterprises.

Under our Charter it is illegal to purchase land for this purpose. I believe the same result can be obtained, however, by acquiring land in shallow portions adjacent to the Spring Gardens for a city dump. This could be bulkheaded in and refuse ashes from the city deposited there. In a short time this would develop into a large area or available land, and could be sold, rented or donated for factory purposes, as might be deemed advisable.

THE RELAYING AND REPAIR OF FOOTWAYS.

When I was elected Mayor in May, 1911, there was practically no effective legislation on the subject of relaying or repair of footways. The practice was that the Police Department would give notice of defective footways to the City Engineer, and the City Engineer would in turn give notice to the property-owner, and there the matter stopped. During one year, there were as many as 6,000 notices sent out, but attention was paid to but very few of these, and compliance with the notice was not required in a single instance, for the reason that the ordinance then in effect was very loosely drawn, and was incapable of effective enforcement.

I thereupon, early in the present administration, prepared an enforceable ordinance, requiring property-owners, upon notice from the City Engineer, to put down new footways and to give the City Engineer a discretion as to what material he would require for the repair of the footways. This we have found to be most efficient, with the result that the city has either laid footways on behalf of property-owners, charging the cost against the property-owner, or has required the owner himself to put down a new footway. This, if continued vigorously, will give Baltimore noticeably excellent footways.

The necessity for this has been due to the fact that the footways have been allowed by Baltimore city to get into a deplorable condition, and when this condition was added to by sewerage operation in making connections, some drastic action became necessary to improve the situation, which action has been taken and with good results.

BRIEF SUMMARY OF YEAR'S WORK.

Fallsway paved and open to traffic, from Baltimore to Madison streets.

First section Key Highway open to public.

Edmondson avenue, from Gwynn's Falls to western city line, has been paved with bituminous concrete.

Ostend Street Viaduct and Lee Street Viaduct constructed and opened to traffic within a year.

Municipal Garage opened and operating successfully.

Bureau of Information and Complaints established in rotunda of City Hall.

Forestry Department showing good results.

MUNICIPAL JOURNAL rounds out its first year of existence with excellent results.

Daily reports are now submitted to the Mayor by all departments.

Discounting city bills—saving $10,000 a year.

By an expenditure of approximately $3,500, an unused floor space on the fourth floor of the City Hall, 40 by 140 feet, was made available for city purposes, effecting a saving of $7,000 annually, if the city were required to rent such quarters.

Hilton street, extending from the Frederick road to Edmondson avenue, has been opened and graded, and paving will be begun in the near future.

Grading of Thirty-third street, Charles street to Hillen road, a most important work.

More work done by the Commissioners for Opening Streets in last two years than by previous commissions in preceding twenty years.

Widening of Aisquith street, between Baltimore and Fayette streets, giving a broad thoroughfare in place of a small, narrow street, and relieving Fayette street from car line, from Gay to Aisquith streets.

Fallsway assessments sustained by the Court of Appeals.

Harbor odors and injury to boats have been eliminated by the operation of the Sewerage Pumping Station and Disposal Plant.

The paving of the Frederick road, between Bentalou street and the western city limits, has been practically completed.

Grading of Pennsylvania avenue, Reisterstown road and the establishment of the Park Circle at Park Heights avenue.

Initial appropriation of $100,000 as a nucleus for Civic Center project.

Creation of Municipal Insurance Fund.

Third and fourth edition of the "Baltimore Book."

Condemnation of Charles Street Plaza at Cathedral Place, University Parkway and Thirty-seventh and Thirty-eighth streets.

Condemnation of plaza at St. Paul, Hamilton and Courtland streets, and extension of Courtland street.

Ordinance putting the markets on a self-supporting basis, sustained by the Court of Appeals.

More important legislation from the last Legislature than from any previous Legislature. Chief among the bills passed are:

Compel railroad and railway companies to pay for paving in railway area. This, it is estimated, will save the tax-payers of Baltimore $1,500,000.

Exempting city stock from taxation by State, thus saving $100,000 a year to the tax-payers.

One million six hundred thousand dollars for new Light Street Bridge, and paving in Baltimore city.

Requiring all purchases of property by city departments, exceeding $500, to be approved by Board of Estimates.

Providing for consolidation of engineering departments.

More speedy procedure for opening streets.

Abolishing 3 per cent. penalty and $3.50 surveyor's charge for taxes in arrears.

Giving city authority to decide upon kind of ballast under railway ties.

Three-million-dollar Sewerage Loan.

Seventy-five thousand dollars for "Star-Spangled Banner" Centennial.

Exempting $500 of household furniture from taxation.

Providing a Bureau of Municipal Liens.

Authorizing publication of legal advertisments in MUNICIPAL JOURNAL.

Senatorial Primary Election Law (mass vote) introduced in the Legislature, and State-wide campaign, so that Baltimore might have a voice in the selection of candidates for the United States Senate.

State campaign for the extension of the city limits, so that Baltimore might take its rightful place in the list of American cities, according to population and area. Bill introduced in the Legislature to carry this plan into effect.

The Pennsylvania Railroad terminal plans are in abeyance on account of the stringency in the money market, I am informed, and the difficulty of raising money in advance of the decision of the Interstate Commerce Commission on the rate increase.

Paving tax sustained by the Court of Appeals.

More general use of school buildings for neighborhood meetings, educational work, lectures, etc.

Purchase of the Carroll Mansion in East Baltimore. This historic building will be preserved and used for educational purposes.

Fireboat "Cataract" rebuilt and launched.

Three new schools dedicated.

The City Register, the City Comptroller and the Auditor of City Accounts have made an extended examination of bookkeeping in other cities. They visited New York, Philadelphia, Boston, Cleveland and Chicago, and found that the system of accounts in Baltimore compares very favorably with and is maintained at much less expense than any of the cities they examined.

They recommended that only minor changes be made in our system of accounts.

I am gratified, therefore, to report that after an expert examination, the bookkeeping system of the city is quite equal to that of any other advanced city in the country.

Very respectfully,

James H Preston

Mayor.

Annual Report

DEPARTMENT OF REVIEW AND ASSESSMENT

SUB-DEPARTMENT

APPEAL TAX COURT

CITY OF BALTIMORE.
1797

FOR THE YEAR 1913

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER

1914

ANNUAL REPORT

OF THE

DEPARTMENT OF REVIEW AND ASSESSMENT

SUB-DEPARTMENT

APPEAL TAX COURT

CITY HALL

BALTIMORE, January 1, 1914

To the Honorable the Mayor and City Council of Baltimore.

GENTLEMEN—We beg herewith to submit a report of this Sub-Department for the year ending December 31, 1913.

The taxable basis for 1914 is shown by the following statement delivered to the Board of Estimates and to the City Collector on October 1, 1913. It includes, according to custom, besides the various items of property upon which a levy is directly made by the Mayor and City Council, an estimate for 1914 of the amount of deposits in savings banks upon which the local tax of 18¾ cents per $100 is collected by the City Collector under direct levy by the General Assembly (Code, edition of 1912, Article 81, Section 91).

The statement also includes, according to custom, estimates of the real estate and net assessed value of the shares of national banks and Maryland corporations and of distilled spirits in bond, the amount and valuation of which several species of property are determinable, under the law, as of January 1, 1914.

Real estate (full city rate)		$352,681,639	
Real estate (full city rate), estimated add'l		750,000	
Real estate (suburban rate)		19,613,033	
Real estate (suburban rate), estimated add'l		150,000	
Real estate (rural rate)		26,887,154	
Real estate (rural rate), estimated add'l		100,000	
			$400,181,826
Personal—Individuals, firms and foreign corporations	$49,347,004		
Less plant exemption	4,808,735		
		$44,538,269	
Net value of shares of Maryland incorporated companies (estimated)	$53,475,114		
Less plant exemption	6,475,114		
		47,000,000	
Distilled spirits in bond (estimated)		900,000	
Securities (30c. rate)		191,970,999	
Securities (30c. rate), estimated, non-stock corporations		1,100,000	
Deposits in savings banks (18¾c. rate), est.		96,000,000	
			381,509,268
Total			$781,691,094

The form in which we present the table of the basis for 1914 differs from previous tables in that it shows separately the estimated portions of the several classes of real estate. These estimates cover the new improvements of Maryland corporations which had not been completed by October 1, 1913, but which, in the opinion of the assessors, would be sufficiently advanced by January 1, 1914, to justify their assessment for 1914. Under decisions of the courts, the real estate of Maryland corporations is not subject to the October clause of the City Charter, but is assessable as of January 1.

REAL ESTATE ASSESSMENTS

The basis of 1914 exceeds that of 1913 by $39,781,782. The result surpassed our own expectations. The increase of $17,623,478 in full rate real estate represents an addition of more than 5 per cent. over the same item last year. This is a better showing than that of New York, where the increase for 1914 is less than 2 per cent.; and in Chicago, which gained only about 1 per cent. over the previous year. Real estate of all classes now aggregates over $400,181,826, while the assessment of all forms of personal property reaches $381,509,268. Of the increase in full rate real property, about $3,000,000 represents property raised from the suburban and rural rates, thus indicating the extent to which the city is gaining through the improvement of streets in the Annex.

Regarding petitions for abatement on real property, there was an increase in the number of applications and in the aggregate amount of abatements, although there was a decrease in the number of applications favorably acted upon.

An idea of the work which has been accomplished by the Appeal Tax Court since the great fire of 1904 may be gathered from a comparison of the real estate basis for 1904, when it was $264,160,549, with that of 1914, when it is $400,181,826. In the same period, personal assessments have risen from $227,494,112 to $381,509,268.

We have, with the assistance of our special assessors and chief assessor, prepared printed tables for the calculation of valuations of the real property by the unit system. It is our purpose to use these tables in future assessments and also to prepare unit value maps, so that our assessments may be made as scientifically as possible, and so that property-owners may ascertain the method by which the land valuations are determined. The unit system itself has long been used by our special assessors for their own guidance, but without such devices as prepared tables and unit value maps, which, in view of the greater volume of work and the need for expedition in attending to the inquiries of taxpayers, have now become necessary.

We are now engaged upon the task of rewriting our assessment books according to a system by which the annual assessment roll will be prepared by us instead of by the City Collector, as heretofore. Under the new system this roll will be made up new each year—a duplicate copy being prepared at the same time for the use of the City Collector. As a result of this, the ledgers of the Collector will, beginning with

1915, be arranged according to the locality of the property, in place of the present alphabetical arrangement according to ownership. The Board of Estimates has granted us a special appropriation to put these changes into effect. In preparation for this work, we have taken a census of the separately assessed parcels of ground in the city, which shows a total of 127,584, distributed by wards and classes as follows:

WARDS	Number of Lots		
	City	Suburban	Rural
First	5,951	....	....
Second	3,041	....	....
Third	3,296	....	....
Fourth	4,997	....	....
Fifth	3,606	....	....
Sixth	6,108	....	....
Seventh	5,959	....	....
Eighth	6,888	187	528
Ninth	2,625	965	2,368
Tenth	3,656	....	....
Eleventh	3,940	....	....
Twelfth	4,666	939	1,156
Thirteenth	3,387	1,358	2,207
Fourteenth	4,269	....	....
Fifteenth	4,587	1,924	4,486
Sixteenth	4,966	560	1,451
Seventeenth	4,026	....	....
Eighteenth	4,196	....	....
Nineteenth	4,673	....	....
Twentieth	4,487	983	3,018
Twenty-first	4,677	....	....
Twenty-second	3,413	....	....
Twenty-third	3,679	....	....
Twenty-fourth	4,361	....	....
Total	105,454	6,916	15,214

SUMMARY

City	105,454
Suburban	6,916
Rural	15,214
Grand total	127,584

SHARES OF MARYLAND CORPORATIONS

Another interesting feature of the basis is the increase in the net assessment of the shares of Maryland corporations. Our estimates for 1913 was $42,000,000, but the actual assessments returned for the year were nearly $45,000,000; the difference being due to increases secured by us by appeals from the State Tax Commissioner's assessments and pushed to a successful conclusion with the aid of the City Solicitor. This enables us to count on at least as much for the present year, together with a further increase to be expected from the enlargement of corporations and the incorporation of concerns that are now doing business as firms or individuals. Indeed, this tendency to incorporate prepared us to expect a slight decrease in the personal assessment against firms and individuals. We are all the more gratified that the good work of our assessors has more than offset the losses from the incorporation of firms and from the removal and destruction of property.

NEW IMPROVEMENTS

The number of new improvements assessed for 1914 at the full rate is 1,221, and the amount of the assessments is $4,313,842, as against 1,346 new improvements for the previous year, assessed at $4,954,917. This shows a slight falling off both in number and amount. On the other hand there were 440 additions to old improvements assessed at $249,960 for 1914 at the full rate, as compared with 347 additions assessed at $230,450 for the previous year. There has been a substantial increase, however, in the number of new improvements erected in the Annex and assessable at the suburban rate. For 1914 the number is 508, as against 374 for 1913; while the assessments are $1,300,475, as against $1,159,000. There is also an increase in the amount of the assessments for 1914 over the amount for 1913 on additions to old improvements. In regard to improvements assessed at the rural rate there has been a reduction in the number as well as in the amount of the assessment.

PLANT EXEMPTIONS

Plant exemptions (machinery of manufacturers) show an increase in number from 589 for 1913 to 614 for 1914, and an increase in amount from $10,608,257 to $11,283,849.

It will be of interest to show the changes in plant exemptions over a period of years (abstracted from our annual reports of the taxable basis):

YEARS	Firms, Individuals and Foreign Corporations	Domestic Corporations	Totals
1908	$4,412,951	$4,242,632	$8,655.583
1909	4,649,172	4.127,717	8,776,889
1910	4.154,053	4,384,145	8,538,198
1911	4,661,627	4,570,682	9,232,309
1912	4,903.535	5,281,923	10,185,458
1913	4,511,466	6,096,791	10,608,257
1914	4,808,735	6,475,114	11,283,849

It should be noted that these figures were prepared for each year at the time the basis for the following calendar year was made up and therefore were estimated in part. There has generally been a subsequent increase in the exemptions of Maryland corporations and in the total for the year, due in part to applications made after October 1, and in part to transfers made necessary by the conversion of firms into corporations after October 1.

TAX LITIGATION

Only two cases bearing on taxation were decided by the Court of Appeals during the year 1913.

In Smith vs. Baltimore, 120 Md. 143, the court affirmed the ruling of the City Court to the effect that a private street, properly improved, could be used as a qualifying boundary for a full rate block in the Annex, and that curbs (in the ordinary sense) were not necessary if the street was provided with gutters of stone, brick or other substantial material.

The other decision (Leser et al. vs. Wagner, 120 Md. 671) affirms the validity of the Act of 1912, Chapter 688, which imposes a special paving tax on property abutting on or adjoining improved pavements, laid without special assessment against the property. The principal ground of attack against the constitutionality of the act, was the claim that it was retroactive and constituted a taking of property without due process of law, because the tax was imposed where the improved paving had long been laid and paid for and even where there had been a change of owners since then. All the objections were, however, overruled by the court.

SUGGESTED LEGISLATION

In a communication to the Board of Estimates; we recommended the total exemption of household furniture and effects on the ground that a fair administration of this tax was practically impossible, because of the expense and difficulty of appraisement and the unwillingness of the people to submit to such periodical visitation and thorough inspection of their homes as is necessary, and because the slight increase in real estate taxes caused by such exemption would not be unfairly distributed and would more than offset the expense, annoyance and inevitable inequality incident to the tax on household effects.

Other legislation recommended is included in the following list:

An amendment of Section 171 of the Charter, providing that the tax roll shall be prepared according to the locality of the property instead of alphabetically according to the names of owners. This will bring the books of the City Collector in harmony with the books of the Appeal Tax Court.

Amendments to require applications for plant exemptions and for revisions of assessments to be filed before September 1, so that they be acted upon before the basis for the next year is fixed.

An act requiring the disclosure of the true consideration in sales of real estate, either in the deed itself or in a separate paper.

An act making all city taxes due on the same date. Different dates now exist for real and personal taxes.

Legislation making the State, counties and cities preferred creditors, not only for taxes in arrears but also for taxes to become due on assessments already fixed for the year.

An amendment to simplify the assessment machinery, so that hearings may be given after tentative assessments have been made instead of before.

An act taxing business corporations on their assets as provided by House Bill No. 20 in the session of 1912. A similar bill has been passed by the House three times and came within one vote in 1912 of passage by the Senate. The bill will put incorporated mercantile and manufacturing concerns on an equality with their unincorporated competitors and greatly encourage the establishment of new enterprises and the incorporation under Maryland charters of domestic concerns which now take out charters in other States.

Respectfully submitted,

OSCAR LESER, *President*
A. B. CUNNINGHAM
JOHN GILL, JR.
Judges

TABLE A

Statement of New Assessments and Abatements made for the Years 1910, 1911 and 1912 and Entered Between January 1, 1913 and December 31, 1913, and for the Year 1913 Entered Between October 1, 1912 and December 31, 1913.

YEAR	Real	Personal, Full Rate	Securities, 30c. Rate
1910 To new assessments (city, full rate)	$125	$40,466	$2,358,108
1910 To new assessments (suburban, $1.30 rate)	......	......	......
1910 To new assessments (rural, 66⅓c. rate)	164	......	......
1910 By abatements (city, full rate)	14,330	274,846	407,580
1910 By abatements (suburban, $1.30 rate)	......	......	......
1910 By abatements (rural, 66⅓c. rate)	137,617	......	......
1911 To new assessments (city, full rate)	480,841	32,510	2,765,935
1911 To new assessments (suburban, $1.30 rate)	......	......	......
1911 To new assessments (rural, 66c. rate)	164	......	......
1911 By abatements (city, full rate)	18,131	495,243	550,743
1911 By abatements (suburban, $1.30 rate)	2,900	......	......
1911 By abatements (rural, 66c. rate)	145,797	......	......
1912 To new assessments (city, full rate)	1,108,936	4,912,662	3,276,033
1912 To new assessments (suburban, $1.26 rate)	......	......	......
1912 To new assessments (rural, 65c. rate)	164	......	......

TABLE A—Concluded

YEAR	Real	Personal, Full Rate	Securities, 30c. Rate
1912 By abatements (city, full rate)	$110,472	$738,469	$1,338,891
1912 By abatements (suburban, $1.26 rate)......................	3,724	....	....
1912 By abatements (rural, 65c. rate)	27,749	....	....
1913 To new assessments (city full rate)......................	6,583,950	1,586,595	17,387,446
1913 To new assessments (suburban, $1.30 rate)................	269,707	....	....
1913 To new assessments (rural, 67c. rate)......................	186,043	....	....
1913 By abatements (city, full rate)	4,503,064	2,075,465	5,570,371
1913 By abatements (suburban, $1.30 rate)......................	66,680	....	....
1913 By abatements (rural, 67c. rate)	116,762	....	....

TABLE B

Number of Buildings for which Licenses for Permits were Issued from January 1, 1913 to December 31, 1913.

Assessment Districts	New Buildings	Additional Improvements	Total
First	428	26	454
Second	46	28	74
Third	8	32	40
Fourth	20	36	56
Fifth	12	18	30
Sixth	306	46	352
Seventh	10	18	28
Eighth	12	37	49
Ninth	28	60	88
Tenth	8	38	46
Eleventh	12	16	28
Twelfth	24	42	66
Thirteenth	6	18	24
Fourteenth	8	12	20
Fifteenth	16	24	40
Sixteenth	6	20	26
Seventeenth	50	22	72
Eighteenth	65	34	99
Nineteenth	194	38	232
Twentieth	8	29	37
Twenty-first	1,240	72	1,312
Twenty-second	429	60	489
Totals	2,936	726	3,662

TABLE C

New Buildings, Additional Improvements and Assessed Valuations, January 1, 1913 to December 31, 1913, Full City Rate.

ASSESSMENT DISTRICTS	Number of New Improvements Assessed	Assessed Values	Number of Additional Improvements Assessed	Assessed Values
First	386	$464,850	24	$21,185
Second	16	78,300	22	9,400
Third	12	22,650	21	5,650
Fourth	14	53,850	24	11,800
Fifth	10	38,000	19	8,550
Sixth	208	346,850	48	12,200
Seventh	16	17,600	26	7,450
Eighth	21	340,000	20	14,100
Ninth	30	1,050,000	21	19,650
Tenth	6	135,000	17	28,450
Eleventh	6	124,800	18	16,200
Twelfth	14	18,500	30	12,800
Thirteenth	5	7,200	16	12,750
Fourteenth	9	43,750	18	5,550
Fifteenth	8	18,870	13	12,650
Sixteenth	7	62,800	5	1,800
Seventeenth	35	74,600	29	11,800
Eighteenth	68	158,400	20	12,200
Nineteenth	144	248,300	23	9,200
Twentieth	5	7,200	8	3,150
Twenty-first	108	556,700	8	4,175
Twenty-second	93	445,622	10	9,250
Totals	1,221	$4,313,842	440	$249,960

TABLE C—Concluded

SUBURBAN RATE

ASSESSMENT DISTRICTS	Number of New Improvements Assessed	Assessed Values	Number of Additional Improvements Assessed	Assessed Values
Twenty-first......	224	623,125	17	16,275
Twenty-second...	284	677,350	8	6,250
Totals........	508	1,300,475	25	22,525

RURAL RATE

ASSESSMENT DISTRICTS	Number of New Improvements Assessed	Assessed Values	Number of Additional Improvements Assessed	Assessed Values
Twenty-first......	498	1,161,950	10	2,600
Twenty-second...	352	519,400	2	300
Totals........	850	1,681,350	12	2,900

TABLE D

New and Increased Assessments on Personal Property and Securities in the Fiscal Year ending December 31, 1913, for the Basis of 1914 (Exclusive of Assessments carried forward from the Basis of 1913 into the Basis of 1914).

ASSESSMENT DISTRICTS.	Personal (Full Rate)		Amount of Securities Assessed or Reassessed
	Number of Assessments	Amount Assessed	
First	30	$178,540	$128,750
Second	46	287,654	6,800
Third	20	14,865	9,487
Fourth	48	65,750	32,740
Fifth	16	42,850	16,845
Sixth	70	98,750	9,200
Seventh	62	85,900	....
Eighth	348	650,785	1,580,765
Ninth	906	3,839,521	71,393,036
Tenth	94	455,670	28,470
Eleventh	48	125,700	1,348,765
Twelfth	312	220,842	1,185,000
Thirteenth	94	375,460	65,875
Fourteenth	60	35,750	....
Fifteenth	70	185,844	12,865
Sixteenth	62	85,700	....
Seventeenth	58	350,865	....
Eighteenth	47	205,800	....
Nineteenth	185	48,750	165,465
Twentieth	140	42,845	12,865
Twenty-first	586	305,740	185,745
Twenty-second	302	185,600	385,650
Totals	3,604	7,889,181	76,568,323

TABLE E

Petitions for Abatement of Real Estate Assessments for 1913, Filed During the Year 1913.

ASSESSMENT DISTRICTS	Number of Appeals	Number Dismissed	Number Granted	Amount Abated
First	9	2	7	1,455
Second	9	9	....	....
Third	10	7	3	2,900
Fourth	14	14	....	....
Fifth	7	7	....	....
Sixth	35	21	14	1,550
Seventh	12	8	4	5,150
Eighth	59	19	40	111,068
Ninth	44	17	27	81,730
Tenth	5	5	....	....
Eleventh	17	7	10	13,500
Twelfth	70	18	52	47,600
Thirteenth	26	12	14	7,905
Fourteenth	6	3	3	20,050
Fifteenth	4	3	1	300
Sixteenth	6	6	....	....
Seventeenth	32	32	....	....
Eighteenth	16	13	3	350
Nineteenth	104	65	39	9,050
Twentieth	21	15	6	2,825
Twenty-first	190	37	153	304,577
Twenty-second	65	21	44	130,274
Totals	761	341	420	740,284

TABLE F

Number and Assessed Value of Manufacturing Plants Exempted from City Taxes for 1913.

	Number	Assessed Value
Firms, individuals and foreign corporations..	375	$4,920,431
Incorporated companies (Maryland charters)	239	6,495,229
Totals	614	$11,415,660

TABLE G

APPROPRIATIONS AND DISBURSEMENTS

SALARY ACCOUNT

Appropriation	$67,600.00
Salaries paid	67,048.29
Balance	$551.71

EXPENSE ACCOUNT

Appropriation	$2,535.00
Expenditures	2,535.00

TABLE H

Statement of Notices, Assessments, Transfers, Abatements and Investigations, from January 1 to December 31, 1913.

Abatements and assessments entered under orders of Court		65,472
Notices in the matter of hearings by the Court:		
On real estate assessments (other than new improvements)	23,829	
On new improvements	1,350	
On personal property	3,633	
Schedules delivered on personal property	2,866	
		31,678
Investigations made by assessors and passed by the Court:		
On applications for abatement or reduction of assessments on real estate (Table E)	761	
On plant exemption applications	614	
On applications for abatements or reduction of assessments on personal property	1,897	
		3,272
Number of transfers of real estate	6,774	
Number of buildings for which licenses were issued	3.662	
Nunber of notices for reclassification of Annex properties	1,354	
		11,790
Number of notices for sewerage connections	358	
Number of charges for sewerage connections	1,689	
Number of notices for Special Paving Tax	11,129	
		13,176
Total number of transactions for the year		125,388

REAL ASSESSMENTS MADE BY SPECIAL ASSESSORS DURING 1913 FOR 1914

Full city rate	$67,795,170
Suburban rate ($1.30)	233,376
Rural rate (66c.)	109,853
Total	$68,138,399
Former assessment	59,493,230
Increase	$8,645,169

TABLE I

New Buildings Appraised and Exempted for 1914.

Assessment Districts	Mayor and City Council								
	Schools	Engine Houses	Libraries	Parks	Miscellaneous	Churches	Hospitals	Educational	Benevolent
First									
Second	$118,000								
Third									$5,000
Fourth					$4,000	$400		$60,000	
Fifth						2,000	$ 71,500		
Sixth	110,000						147,000		
Seventh						250			
Eighth									
Ninth					2,600		450	11,000	
Tenth									
Eleventh						5,000			
Twelfth						700			
Thirteenth						2,500		9,000	
Fourteenth									
Fifteenth									
Sixteenth									
Seventeenth									
Eighteenth	155,000				3,200	18,400			
Nineteenth						7,000			
Twentieth									
Twenty-first				$6,500		122,000	800		
Twenty-second	454,000					250			
Totals	$837,000			$6,500	$9,800	$158,500	$219,750	$80,000	$5,000

SPECIAL PAVING TAX

Final Recapitulation

	Class	Total number of feet	Rate per lineal foot	Total
Number of front feet	A	182,019′ 11″	$0.15	$27,302.99
Number of front feet	B	26,437′ 3″	.10	2,643.73
Number of front feet	C	3,835′ 6″	.05	191.78
Number of taxable feet on side (½ of total)	A	26,891′ 8″	.15	4,033.75
Number of taxable feet on side (½ of total)	B	4,170′ 4″	.10	417.03
Number of taxable feet on side (½ of total)	C	839′ 1″	.05	41.95
Number of taxable feet on side (⅓ of total)	A	8,361′ 4″	.15	1,254.20
Number of taxable feet on side (⅓ of total)	B	629′ 6″	.10	62.95
Number of taxable feet on side (⅓ of total)	C	405′ 9″	.05	20.29
Total per annum				$35,968.67

ASSESSMENTS ENTERED ON CERTIFICATES OF STATE TAX COMMISSIONER FOR 1913

Shares of National Banks and Maryland Incorporated Companies taxable in Baltimore (full rate)	$53,740,660	
Credit by City Stock deductions (full rate)	10,274,297	
Net amount charged to City Collector		$43,466,363
Securities of Non-Stock Corporations (30c. rate)		1,071,718
Savings Bank Deposits (18¾c. rate)		93,255,372
Distilled Spirits in Bond		845,016

EIGHTY-FOURTH ANNUAL REPORT

OF THE

Board of School Commissioners

TO THE

MAYOR AND CITY COUNCIL OF BALTIMORE

FOR THE

SCHOLASTIC YEAR ENDING JUNE 30,

1913

1797

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER
1914

BOARD OF SCHOOL COMMISSIONERS.

NAME.	ADDRESS.	TERM EXP.
THOMAS McCOSKER, *President*	2112 E. Pratt St.	1916
ALBERT T. CHAMBERS	1012 W. Lafayette Ave.	1914
RICHARD J. BIGGS	1412 Harlem Ave.	1914
JAMES M. DELEVETT	623 Columbia Ave.	1918
SIDNEY P. THANHOUSER	311 W. Baltimore St.	1916
ALBERT L. FANKHANEL	South and Water Sts.	1914
CLARENCE DEEMS	Park Ave. and Wilson St.	1918
HENRY JOESTING, Jr.	201 W. Baltimore St.	1916
ARTHUR B. BIBBINS	2600 Maryland Ave.	1918

OFFICERS.

Francis A. Soper	Superintendent.
Charles J. Koch	First Assistant Superintendent.
Charles A. A. J. Miller	Second Assistant Superintendent.
Joseph C. Hands	Third Assistant Superintendent.
Robert W. Elliott	Fourth Assistant Superintendent.
Rowland Watts	Fifth Assistant Superintendent.
Andrew J. Pietsch	Sixth Assistant Superintendent.
John H. Roche	Secretary.
Frank N. Claridge	First Assistant Secretary.
Joshua R. Jolly	Second Assistant Secretary.
David D. Kennedy, Jr.	Clerk to Secretary.
Henry R. Davis	Supervisor of School Buildings.
Edwin Hebden	Statistician.
Alice A. White	Clerk, Superintendent's Office.
Helen Hardy	Clerk, Superintendent's Office.
Sara C. Tunis	Clerk, Superintendent's Office.
Lois C. Smith	Clerk, Superintendent's Office.
Miriam Graham	Clerk, Attendance Department.

REPORT OF THE

PRESIDENT OF THE BOARD OF SCHOOL COMMISSIONERS.

OFFICE OF THE BOARD OF SCHOOL COMMISSIONERS,
BALTIMORE, June 30, 1913.

HONORABLE JAMES H. PRESTON,
Mayor of the City of Baltimore.

SIR: The Board of School Commissioners respectfully submits the Eighty-fourth Annual Report, showing the condition of the public schools of the City of Baltimore during the scholastic year ending June 30, 1913.

CHANGE IN SCHOOL SYSTEM.

In our last annual report attention was called to important changes then under consideration relating to the methods of teaching and supervision in our school service.

Since then this department has deemed it advisable to abolish the Group Principal System and to adopt the district method of supervision with a principal or disciplinary head in charge of each school. For this purpose the Board of Superintendents was reorganized with Professor Francis A. Soper as Superintendent and six Assistant Superintendents. Professor Charles J. Koch was made First Assistant and placed in charge of the elementary schools; Dr. Charles A. A. J. Miller was elected Second Assistant and given charge of the secondary schools, both under the direction of the Superintendent.

The city was divided into four school districts and Joseph C. Hands, Robert W. Elliott, Rowland Watts and Andrew J.

Pietsch were elected Third, Fourth, Fifth and Sixth Assistants, respectively and assigned to duty as supervisors in the school districts. The new system went into effect February 1, 1912, and seems to meet with general approval. We are waiting for the new Course of Studies, which the Board of Superintendents has under consideration, to make the new system complete.

The Board desires to state that this change has been made without real hardship to any one in the service.

The displaced group principals and vice-principals were assigned to duty in other directions without reduction of salary and their claims will receive due consideration in the future when vacancies in principalships are being filled.

Increase of Teachers' Salaries.

Through the kindness of the Mayor, City Council and Board of Estimates we are enabled to pay the teachers the second installment on the increased salary maximum. It is hoped that we will be able to continue until the maximum of $800 is reached, dependent of course upon satisfactory service.

Class for Defectives.

The Superintendent's report for the school year ending June 30, 1912, shows that a large proportion of our pupils are over age for their grades. The figures are 42 per cent. for white pupils and 64 per cent. for colored children. These retarded children are divided into two unequal classes: first—the larger class composed of those who can recover much if not all the lost time, and secondly—those unfortunates who are really mentally deficient and who can never hope to attain a higher mental age than twelve years. The latter class though much smaller deserves our especial care. Proper attention and facilities for appropriate work will make these children partly self-supporting and happy. By the cooperation of the scientists of the Department of Psychiatry of the Johns Hopkins Hospital, the Board is able to give proper instruction to a small number of these unfortunate children at School No. 7. The teacher in charge has been especially trained for the work at the famous school for defectives at Vineland, N. J. The experience gained in this class will enable the Board to extend this much needed work to other parts of the city.

NIGHT SCHOOLS.

In the past the School Board has not encouraged the teaching of foreign languages in the night schools. The purpose, so far as foreigners are concerned, has been to make them acquainted with English. Owing, however, to the increased opportunities for extending the trade of our city into Spanish speaking countries, the Board has deemed it advisable to open a class in Spanish at the City College Night School. The response in enrollment was enormous, far more than could be provided for. By installing lights in more rooms provision has been made to accommodate all applicants. The teachers are all excellent Spanish students thoroughly enthusiastic in their work. The classes meet on Mondays, Tuesdays and Thursdays from 7.30 to 9.30 o'clock P. M.

NIGHT CLASSES IN SCIENCE.

For the first time in the history of our schools the chemical and physical laboratories at the City College have been opened to night school students. The instructions in the classes aim to lay the foundation of the work in which the students are engaged during the day. The classes are made up of mechanics, electricians, supervisors of factories and chemists. The enrollment exceeded our expectations and the attendance and application of the students deserve the highest commendation. While the cost of maintenance is higher in this class than in the regular night classes we have reason to believe that the return in increased efficiency will be very satisfactory. We have one report of improved methods put into operation in one of our large industrial plants as the direct result of this work. After completing a satisfactory course the student will receive a diploma.

EVENING LECTURES.

To a further extension of the work of the night schools the School Board authorized public evening lectures. During the winter thirteen lectures were given in public school buildings. The total attendance was about thirteen hundred persons. The Board hopes to extend this work as rapidly as added facilities will allow. It is especially desired to have a course of lectures on Civics in different parts of the city.

ADDITIONAL SCHOOL ACCOMMODATION.

At the beginning of the school year, September, 1912, the new school building No. 70, William street and Warren avenue, was added to our school accommodations. This is an ideal school building containing all that is necessary for the safety, health and comfort of teachers and pupils. It has twenty-four classrooms and a large assembly hall. It is equipped for all the elementary grades, together with manual training and cooking classes. It will accommodate twelve hundred pupils. The people of South Baltimore celebrated its opening with appropriate ceremonies.

An addition of ten classrooms and a large assembly hall to School No. 64, Forest Park, has made it a first-class building. Its enlargement has relieved a former crowded condition and furnished accommodations for the pupils of that vicinity for several years to come.

An addition of four classrooms and an assembly hall to School No. 13, Patterson Park avenue and McElderry street; and three rooms to School No. 63, Ninth street and Westwood avenue, have furnished much needed accommodations to those sections.

POLYTECHNIC INSTITUTE.

The handsome new buildings at North avenue and Calvert street, the future home of the Polytechnic Institute, are nearly finished. We expect to have them completed and equipped ready to occupy at the beginning of the next school year.

The new School No. 6 which is now being erected on the site of the old structure, South Ann street, is to be a sixteen-room building with all modern conveniences. It is well advanced and will soon be under roof. We hope that the pupils who are now confined to their present uncomfortable quarters in the hall over the Broadway Market will be enabled to occupy it after the next summer vacation.

New Schools No. 22, Scott and Hamburg streets, and No. 27, Fayette and Chester streets, both modern 24-classroom buildings are well under way and should be finished in time for service next September.

The drawings are being made for enlarging School No. 83, Lakewood and Philadelphia avenues. The new building is to contain 18 classrooms, in order to meet the urgent needs of that rapidly growing locality. The present structure contains 21 classrooms. It was built about ten years ago and from the beginning it has been difficult to accommodate the enrollment. There are eight portable buildings in the yard and the basement of the Enoch Pratt Library building close by is being used as an annex to the school. The present enrollment is 1,573 pupils and it will be higher. The new building is an absolute necessity and should be, if possible, completed before the schools assemble next fall.

Plans are also being prepared for a ten-room enlargement of School No. 99, North avenue and Washington street. This increase is necessary to meet the increasing school population in that vicinity. It is expected to have the building finished by September, 1913.

The Board desires to call attention to the need of a new colored school in East Baltimore, to take the place of schools

Nos. 101 and 111, for which an appropriation was made from the last school loan.

SCHOOL BUILDINGS OCCUPIED.

School houses owned by the city	108
Dwellings owned by the city	3
Portable frame buildings owned by the city	34
Buildings or parts of buildings rented by the city	18
Total number of buildings occupied	163

NEW BUILDINGS COMPLETED DURING THE SCHOLASTIC YEAR 1912-1913.

School No. 70, William street and Warren avenue; 24-classroom building.

School No. 64, Liberty road and Maine avenue, Forest Park; addition of 10 classrooms.

School No. 63, Ninth street and Westwood avenue; addition of 8 classrooms.

School No. 13, Patterson Park avenue and McElderry street; addition of 4 classrooms.

NEW BUILDINGS NOW UNDER CONSTRUCTION.

Baltimore Polytechnic Institute, North avenue and Calvert street; should be completed by September 1, 1913.

School No. 22, Hamburg and Scott streets; 24-classroom building; should be completed by September 1, 1913.

School No. 6, Ann street, near Canton avenue; 16-classroom building; should be completed by September 1, 1913.

School No. 27, Fayette and Chester streets; 24-classroom building; should be completed by September 1, 1913.

PLANS FOR NEW BUILDINGS.

School No. 83, Lakewood and Philadelphia avenues; addition of 18 classrooms.

School No. 99, North avenue and Washington street; addition of 10 classrooms.

RENTED BUILDINGS VACATED.

School No. 118, Carey and Calhoun streets.
School No. 64 Branch, Granada and Penhurst avenues—lot.

BUILDING RENTED.

School No. 27 Annex, 2214 Fairmount avenue.

PORTABLE SCHOOL BUILDINGS.

Two transferred from School No. 63 to School No. 77, Washington street, near Fayette street.

Two transferred from the Watson lot, Granada and Penhurst avenues, to School No. 64 Branch, Garrison and Penhurst avenues.

One transferred from School No. 118 to School No. 83, Lakewood and Philadelphia avenues.

STATISTICS FOR THE SCHOLASTIC YEAR ENDING JUNE 30, 1913.

DAY SCHOOLS.

SCHOLASTIC YEAR 1912-13.	Normal.	Secondary.	Elementary.	All Day Schools.
Total number of different pupils enrolled	215	5,282	68,323	73,820
Average net roll or register	180	4,616	63,036	67,832
Average number belonging	171	4,420	59,159	63,750
Average attendance	163	4,135	52,965	57,263

NIGHT SCHOOLS.

Total enrollment for scholastic year 1912-13	8,788
Average net roll or register	4,310
Average attendance	3,188
Number belonging at end of term	3,406

Summer Vacation Schools.

Total enrollment for scholastic year (summer of 1913)	1,329
Average net roll or register	1,076
Average attendance	924
Number belonging at end of term	962

Number of normal schools	2	
Number of secondary schools	5	
Number of elementary schools	104	
Total day schools		111
Number of night schools		28
Number of summer schools		6
Total number of schools of all kinds		145

Number of teachers, including principals:

In normal schools		10
In secondary schools		197
In elementary schools		1,582
Number of superintendents	1	
Number of assistant superintendents	6	

Supervisors and special teachers:

Practice	5	
Music	4	
Drawing	9	
Sewing	32	
Domestic science	25	
Manual training	16	
Physical training	3	
		101
Total		1,890
Number of teachers in night schools		141
Number of teachers in summer schools		32

SCHOOL ATTENDANCE DEPARTMENT.

Number of cases investigated	42,866
Number of absentees	34,127
Number of truants	3,387
Number of non-attendants put into school	879
Number of special cases	3,331
Number of visits to homes	40.390
Number of visits to schools	6,905
Number refused permits to work	970
Number of magistrate cases	266
Number of prosecutions before Juvenile Court	85
Number of prosecutions before Criminal Court	1
Number committed to Parental School	37

FINANCIAL STATISTICS.

Amount to credit, July 1, 1912		$782,063 41
Appropriated by the Mayor and City Council for the expenses of the schools for the fiscal year 1913		1,848,544 00
Received from the State for free text-books		55,844 75
Received from exchange and sale of old books		3,099 90
Received from the State for High School Fund		10,000 00
Received from intestate estates		400 56
Total		$2,699,952.62
Unexpended December 31, 1912, paid into General Fund, City Treasury	$38,109 14	
Expended to June 30, 1913	1,876,840 06	
		1.914.949 20
Unexpended, carried forward to 1913-14		$785,003 42

Respectfully submitted,

THOMAS McCOSKER,
President of the Board of School Commissioners.

In Memoriam.

The following named teachers died during the scholastic year 1912-1913:

September 25—Walter H. Harris.

September 25—Bertha K. Johnson.

October 9—Mamie B. Holmes.

November 13—Mayme O. Taylor.

December 11—Annie H. Graham.

December 11—May G. Hennessee.

December 23—John S. Black.

January 22—S. Elizabeth Hopkins.

February 26—Laura V. DeValin.

February 26—Mary E. Frame.

March 12—Sue Browning.

March 26—Annie E. McBee.

April 9—William Cary Robinson.

May 14—Matilda Gebhardt.

May 28—Alice L. Frey.

SECRETARY'S STATEMENT

OF THE

ACCOUNTS OF THE PUBLIC SCHOOLS FROM JULY 1, 1912, TO JUNE 30, 1913.

(SCHOLASTIC YEAR 1912-1913.)

Amount to credit, July 1, 1912		$782,063 41
Appropriated by the Mayor and City Council for the expenses of the schools for the fiscal year 1913		1,848,544 00
Received from the State for free text-books		55,844 75
Received from exchange and sale of old books		3,099 90
Received from the State for State High School Fund		10,000 00
Received from intestate estates		400 56
Total		$2,699,952 62
Unexpended December 31, 1912, paid into General Fund, City Treasury	$38,109 14	
Expended to June 30, 1913	1,876,840 06	
		1,914,949 20
Unexpended, carried forward to 1913-14		$785,003 42

Itemized as follows:

OFFICE SALARIES.

Amount to credit, July 1, 1912	$4,919 36	
Appropriated for fiscal year 1913	9,200 00	
		$14,119 36
Unexpended December 31, 1912, paid into General Fund, City Treasury	$436 03	
Expended to June 30, 1913	9,083 33	
		9,519 36
Unexpended, carried forward to 1913-14		$4,600 00

Office Expenses.

Amount to credit, July 1, 1912	$750 75	
Appropriated for fiscal year 1913	1,500 00	$2,250 75
Unexpended December 31, 1912, paid into General Fund, City Treasury	....	
Expended to June 30, 1913	$1,342 07	1,342 07
Unexpended, carried forward to 1913-14		$908 68

Day School Salaries.

Amount to credit, July 1, 1912	$573,547 97	
Appropriated for fiscal year 1913	1,617,123 00	$2,190,670 97
Unexpended December 31, 1912, paid into General Fund, City Treasury	$32,790 21	
Expended to June 30, 1913	1,587,126 71	1,619,916 92
Unexpended, carried forward to 1913-14		$570,754 05

Day School Expenses.

Amount to credit, July 1, 1912	$91,673 41	
Appropriated for fiscal year 1913	160,650 00	$252,323 41
Unexpended December 31, 1912, paid into General Fund, City Treasury	....	
Expended to June 30, 1913	$155,036 97	155,036 97
Unexpended, carried forward to 1913-14		$97,286 44

NIGHT SCHOOL SALARIES.

Amount to credit, July 1, 1912	$10,212 05	
Appropriated for fiscal year 1913	21,321 00	
		$31,533 05
Unexpended December 31, 1912, paid into General Fund, City Treasury	$382 90	
Expended to June 30, 1913	20,180 35	
		20,563 25
Unexpended, carried forward to 1913-14		$10,969 80

NIGHT SCHOOL EXPENSES.

Amount to credit, July 1, 1912	$3,010 78	
Appropriated for fiscal year 1913	4,500 00	
		$7,510 78
Unexpended December 31, 1912, paid into General Fund, City Treasury	$1,500 00	
Expended to June 30, 1913	3,995 72	
		5,495 72
Unexpended, carried forward to 1913-14		$2,015 06

FREE TEXT BOOKS.

Amount to credit, July 1, 1912	$40,091 61	
Received from the State from July 1, 1912, to June 30, 1913	55,844 75	
Amount received from sale and exchange of old books, July 1, 1912, to June 30, 1913	3,099 90	
		$99,036 26
Expended to June 30, 1913		62,444 65
Unexpended, carried forward to 1913-14		$36,591 61

STATE HIGH SCHOOL FUND.

Amount to credit, July 1, 1912	$13,446 80	
Received from the State from July 1, 1912, to June 30, 1913	10,000 00	
		$23,446 80
Expended to June 30, 1913		16,637 08
Unexpended, carried forward to 1913-14		$6,809 72

INTESTATE ESTATES.

Amount to credit, July 1, 1912	$10,468 19	
Received from intestate estates from July 1, 1912, to June 30, 1913	400 56	
		$10,868 75
Expended to June 30, 1913		....
Unexpended, carried forward to 1913-14		$10,868 75

EQUIPPING NEW BUILDINGS.

Amount to credit, July 1, 1912	$22,859 69	
Appropriated for fiscal year 1913	21,250 00	
		$44,109 69
Expended to June 30, 1913		9,494 64
Unexpended, carried forward to 1913-14		$34,615 05

PARENTAL SCHOOL.

Amount to credit, July 1, 1912	$6,535 46	
Appropriated for the fiscal year 1913	7,000 00	
		$13,535 46
Unexpended December 31, 1912, paid into General Fund, City Treasury	$3,000 00	
Expended to June 30, 1913	7,106 02	
		10,106 02
Unexpended, carried forward to 1913-14		$3,429 44

VACATION CLASSES.

Appropriated for the fiscal year 1913	$6,000 00
Expended to June 30, 1913	102 50
Unexpended, carried forward to 1913-14	$5,897 50

HEATING AND VENTILATION.

Amount to credit	$49 39
Expended to June 30, 1913	49 39
Unexpended, carried forward to 1913-14	....

DRINKING FOUNTAINS.

Amount to credit	$4,497 95
Expended to June 30, 1913	4,240 63
Unexpended, carried forward to 1913-14	$257 32

FINANCIAL STATISTICS OF THE PUBLIC SCHOOLS

From July 1, 1912, to June 30, 1913.

(SCHOLASTIC YEAR 1912-1913.)

EXPENSES OF BUSINESS ADMINISTRATION.

Salaries, Secretary's office	$9,083 33	
Stationery and office supplies	469 16	
Fuel	122 89	
Light	158 71	
Other expenses	1,316 04	
		$11,150 13
Supply Warehouse:		
Salaries	$2,279 00	
Hauling	943 62	
Light	27 31	
Other expenses	682 40	
		3,932 33
Total expenses of business administration		$15,082 46

EXPENSES OF EDUCATIONAL ADMINISTRATION.

Salaries, Superintendents	$20,899 68	
Salaries, Clerks in office of Superintendents	4,012 96	
Salaries, Attendance Officers	8,946 25	
Salary, Clerk in Attendance Department	650 00	
Stationery and office supplies	1,181 29	
Other expenses	1,503 55	
Total expenses of educational administration		37,193 73
Total expenses of general administration		$52,276 19

Salaries, Supervisors of Music	$3,843 70	
Salary, Supervisor of Drawing	1,200 00	
Salary, Supervisor of Sewing	900 00	
Salary, Supervisor of Physical Culture	1,500 00	
Salary, Supervisor of Manual Training	2,089 50	
Total		$9.533 20
Salaries, Teachers of Drawing	$6,227 82	
Salaries, Teachers of Sewing	19,340 16	
Salaries, Teachers of Physical Culture	1,443 29	
Total		27,011 27
Total		$36.544 47

Teachers' Training School (White).

Salaries, teachers	$10,968 25	
Salaries, substitutes	4,894 50	
Salary, clerk	499 92	
Salary, librarian	484 60	
Stationery and supplies	388 51	
Text-books	1,367 03	
Other expenses	....	
Office expenses and supplies	162 99	
Total expenses of instruction		$18,765 80
Repairs and replacement of equipment	$624 98	
Total expenses of maintenance		624 98
Equipping old building, exclusive of replacements	$235 75	
Total payments for outlays		235 75
Total		$19,626 53

Teachers' Training School (Colored).

Salaries, teachers	$6,883 91	
Salary, clerk	322 50	
Stationery and supplies	51 56	
Text-books	376 03	
Total		$7,634 00

Baltimore City College.

Salaries, teachers	$56,721 87	
Salaries, substitutes	216 67	
Salary, clerk	670 00	
Salary, librarian	699 99	
Stationery and supplies	2,212 32	
Text-books	3,536 44	
Other expenses	255 30	
Office expenses and supplies	40 19	
Total expenses of instruction		$64,352 78
Salaries, janitors	$4,800 04	
Janitors' supplies	272 67	
Fuel	815 32	
Light and power	1,080 22	
Other expenses	95 08	
Total expenses of operation		7,063 33
Repairs and replacement of equipment	$766 01	
Total expenses of maintenance		766 01
Rent of buildings	$1,115 00	
Total miscellaneous expenses		1,115 00
Equipment, exclusive of replacements	$475 88	
Total payments for outlays		475 88
Total		$73,773 00

BALTIMORE POLYTECHNIC INSTITUTE.

Salaries, teachers	$66,564 44	
Salaries, substitutes	75 00	
Salary, clerk	720 00	
Stationery and supplies	5,690 08	
Text-books	5,488 80	
Other expenses	241 05	
Office expenses and supplies	128 94	
Total expenses of instruction		$78,908 31
Salaries, janitors	$5,520 00	
Janitors' supplies	259 26	
Fuel	1,252 61	
Light and power	1,381 82	
Other expenses	13 60	
Total expenses of operation		8,427 29
Repairs and replacement of equipment	$708 35	
Total expense of maintenance		708 35
Equipping new building	$265 00	
Total payments for outlays		265 00
Total		$88,308 95

Eastern High School.

Salaries, teachers	$38,762 89	
Salaries, substitutes	291 00	
Salary, clerk	458 26	
Salary, librarian	720 00	
Stationery and supplies	1,506 27	
Text-books	2,713 15	
Other expenses	219 62	
Office expenses and supplies	72 77	
Total expenses of instruction		$44,743 51
Salaries, janitors	$5,020 02	
Janitors' supplies	264 90	
Fuel	868 63	
Light and power	1,006 45	
Other expenses	60 76	
Total expenses of operation		7,220 76
Repairs and replacement of equipment	$1,201 12	
Total expenses of maintenance		1,201 12
Equipment, exclusive of replacements	$1,034 41	
Total payments for outlays, exclusive of replacements.		1,034 41
Total		$54,199 80

Western High School.

Salaries, teachers	$49,367 52	
Salaries, substitutes	254 00	
Salary, clerk	499 99	
Salary, librarian	564 00	
Stationery and supplies	1,581 77	
Text-books	2,595 45	
Other expenses	224 74	
Office expenses and supplies	137 37	
Total expenses of instruction		$55,224 84
Salaries, janitors	$4,530 00	
Janitors' supplies	370 75	
Fuel	731 67	
Light and power	1,453 41	
Other expenses	140 22	
Total expenses of operation		7,226 05
Repairs and replacement of equipment	$862 60	
Total expenses of maintenance		862 60
Equipment, exclusive of replacements	$1,789 25	
Total payments for outlays		1,789 25
Total		$65,102 74

Colored High School.

Salaries, teachers	$30,085 98	
Salaries, substitutes	135 00	
Salary, clerk	600 00	
Stationery and supplies	2,819 59	
Text-books	2,008 83	
Other expenses	203 62	
Office expenses and supplies	37 43	
Total expenses of instruction		$35,890 45
Salaries, janitors	$2,040 00	
Janitors' supplies	113 42	
Fuel	821 75	
Light and power	516 71	
Other expenses	13 60	
Total expenses of operation		3,505 48
Repairs and replacement of equipment	$623 63	
Total expenses of maintenance		623 63
Rent of buildings	$1,375 00	
Total miscellaneous expenses		1,375 00
Total		$41,394 56

Elementary Schools (White).

Salaries, teachers	$944,879 58	
Salaries, substitutes	19,100 84	
Stationery and supplies	23,407 04	
Text-books	37,620 12	
Other expenses	2,394 33	
Total expenses of instruction		$1,027,401 91
Salaries, janitors	$99,864 23	
Janitors' supplies	4,089 78	
Fuel	42,987 19	
Light and power	2,671 60	
Other expenses	1,392 20	
Total expenses of operation		151,005 00
Repairs and replacement of equipment	$19,401 19	
Total expenses of maintenance		19,401 19
Rent of buildings	$3,070 25	
Total miscellaneous expenses		3,070 25
Equipping old buildings, exclusive of replacements	$6,873 70	
Equipping new buildings	12,060 32	
Total payments for outlays		18,934 02
Total		$1,219,812 37

ELEMENTARY SCHOOLS (COLORED).

Salaries, teachers	$139,778 81	
Salaries, substitutes	5,694 37	
Stationery and supplies	5,894 10	
Text-books	7,892 40	
Other expenses	310 38	
Total expenses of instruction		$159,570 06
Salaries, janitors	$11,717 87	
Janitors' supplies	722 94	
Fuel	5,161 38	
Light and power	743 63	
Other expenses	243 86	
Total expenses of operation		18,589 68
Repairs and replacement of equipment	$2,930 62	
Total expenses of maintenance		2,930 62
Rent of buildings	$2,245 75	
Total miscellaneous expenses		2,245 75
Equipping old buildings, exclusive of replacements	$336 95	
Total payments for outlays		336 95
Total		$183,673 06

Parental School.

Salaries, teachers	$1,773 80	
Stationery and supplies	35 96	
Total expenses of instruction		$1,809 76
Salaries, superintendent and other employees	$3,541 56	
Janitors' supplies	4 30	
Fuel	318 08	
Light and power	76 88	
Other expenses	2,422 45	
Total expenses of operation		6,363 27
Repairs and replacement of equipment	$431 56	
Total expenses of maintenance		431 56
Rent of building	$570 00	
Total miscellaneous expenses		570 00
Total		$9,174 59

Night Schools.

Salaries, teachers	$18,480 20	
Stationery and supplies	590 11	
Text-books	738 53	
Total expenses of instruction		$19,808 84
Salaries, janitors	$1,386 75	
Light and power	1,333 73	
Total expenses of operation		2,720 48
Repairs and replacement of equipment	$2,256 60	
Total expenses of maintenance		2,256 60
Total		$24,785 92

Vacation Classes.

Equipment of classes	$533 88

RECAPITULATION.

Total expenses of business administration	$15,082 46
Total expenses of educational administration	37,193 73
Total expenses of supervisors and teachers of subjects	36,544 47
Total expenses of training schools	27,260 53
Total expenses of high schools	322,779 05
Total expenses of elementary schools	1,403,485 43
Total expenses of Parental School	9,174 59
Total expenses of night schools	24,785 92
Total expenses of vacation classes	533 88
Grand total	$1,876,840 06

Average annual salary of teachers during the year	$781 29

PER CAPITA COST.

The per capita cost, as here given, is based on the current expenditure and average net roll of pupils for the year.

For all the day schools	$26 76
For all the day secondary schools	69 15
For all the day elementary schools	23 57
For all the night schools	5 75
For Baltimore City College	86 23
For Eastern High School	63 29
For Western High School	49 89
For Baltimore Polytechnic Institute	84 33
For Colored High School	67 30

Here follow:

Financial statistics.
Table A. Itemized expenditures, etc.
Table B. The location of schools, cost, etc.
Table C. Rented buildings, locations, etc.

JOHN H. ROCHE,
Secretary.

TABLE A.

ITEMIZED EXPENDITURES FOR THE SCHOLASTIC YEAR, JULY 1, 1912, TO JUNE 30, 1913.

	Business, Educational, and Instruction.				Operation.					Maintenance.	Miscellaneous.	Equipment (Exclusive of Replacements).		Total.
	Salaries.	Stationery and Supplies.	Text-books.	Other Expenses.	Salaries.	Janitors' Supplies.	Fuel.	Light and Power.	Other Expenses.	Repairs and Replacements.	Rent of Buildings.	Old Schools.	New Schools.	
Secretary's office	$9,083 33	$469 16		$1,316 04			$122 89	$158 71						$11,150 13
Supply warehouse	2,279 00			1,626 02				27 31						3,932 33
Total expenses of business administration	$11,362 33	$469 16		$2,942 06			$122 89	$186 02						$15,082 46
Office of superintendents	$24,912 64	$881 29		$1,503 55										$27,297 48
Attendance Department	9,596 25	300 00												9,896 25
Total expenses of educational administration	$34,508 89	$1,181 29		$1,503 55										$37,193 73
Supervisors of subjects	$9,533 20													$9,533 20
Teachers of subjects	27,011 27													27,011 27
Total expenses of supervisors and teachers of subjects	$36,544 47													$36,544 47
Teachers' Training School (white)	$16,847 27	$388 51	$1,367 03	$162 99						$624 98		$235 75		$19,626 53
Teachers' Training School (colored)	7,206 41	51 56	376 03											7,634 00
Total expenses of training schools	$24,053 68	$440 07	$1,743 06	$162 99										$27,260 53
High schools (white)	$216,585 63	$10,990 44	$14,333 84	$1,319 53	$19,870 06	$1,167 58	$3,668 23	$4,921 90	$309 66	$3,538 08	$1,115 00	$3,299 54	$265 00	$281,384 49
High schools (colored)	30,820 98	2,819 59	2,008 83	241 05	2,040 00	113 42	821 75	516 71	13 60	623 63	1,375 00			41,394 56
Total expenses of high schools	$247,406 61	$13,810 03	$16,342 67	$1,560 58	$21,910 06	$1 281 00	$4,489 98	$5,438 61	$323 26	$4,161 71	$2,490 00	$3,299 54	$265 00	$322,779 05
Elementary schools (white)	$963,980 42	$23,407 04	$37,620 12	$2,394 33	$99,864 23	$4,089 78	$42,987 19	$2,671 60	$1,392 20	$19,401 19	$3,070 25	$6,873 70	$12,060 32	$1,219,812 37
Elementary schools (colored)	145,473 18	5,894 10	7,892 40	310 38	11,717 87	722 94	5,161 38	743 63	243 86	2,930 62	2,245 75	336 95		183,673 06
Total expenses of elementary schools	$1,109,453 60	$29,301 14	$45 512 52	$2,704 71	$111.582 10	$4,812 72	$48,148 57	$3,415 23	$1,636 06	$22,331 81	$5,316 00	$7,210 65	$12,060 32	$1,403,485 43
Parental School, total expenses	$1,773 80	$35 96			$3,541 56	$4 30	$318 08	$76 88	$2,422 45	$431 56	$570 00			$9,174 59
Total expenses, day schools	$1,419 232 16	$43,587 20	$63,598 25	$4,428 28	$137,033 72	$6,098 02	$52,956 63	$8,930 72	$4,381 77	$27,550 06	$8,376 00	$10,745 94	$12,325 32	
Night schools, total expenses	$18,480 20	$590 11	$738 53		$1,386 75			$1,333 73		$2,256 60				$24,785 92
Vacation classes, equipment												$533 88		$533 88
Grand total of expenditures	$1,483,583 58	$45,827 76	$64,336 78	$8,873 89	$138,420 47	$6,098 02	$53,079 52	$10,450 47	$4,381 77	$29,806 66	$8,376 00	$11,279 82	$12,325 32	$1,876,840 06
Summary.														
Total expenses of business administration	$11,362 33	$469 16		$2,942 06			$122 89	$186 02						$15,082 46
Total expenses of educational administration	34.508 89	1,181 29		1,503 55										37,193 73
Total expenses of instruction, day schools	1,419 232 16	43,587 20	$63,598 25	4,428 28										1,530,845 89
Total expenses of operation, day schools					$137,033 72	$6,098 02	52,956 63	8,930 72	$4,381 77					209,400 86
Total expenses of maintenance, day schools										$27,550 06				27,550 06
Total expenses, miscellaneous, day schools											$8,376 00			8,376 00
Total expenses of equipment, old schools												$10,745 94		10,745 94
Total expenses of equipment, new schools													$12,325 32	12,325 32
Total expenses of night schools	18,480 20	590 11	738 53		1,386 75			1.333 73		2,256 60				24,785 92
Total expenses of vacation classes, equipment												533 88		533 88
Grand total of current expenses	$1,483,583 58	$45,827 76	$64,336 78	$8,873 89	$138,420 47	$6,098 02	$53,079 52	$10,450 47	$4,381 77	$29,806 66	$8,376 00	$11,279 82	$12,325 32	$1,853,234 92 23,605 14
Grand total of expenditures, as above														$1,876,840 06

TABLE B.

SCHOOLS.	LOCATIONS.	Erected.	Class Rooms	Size of Lot.	Size of Building.	Ground Rent.	Cost.	
							Lot.	Building.
Balto. City College....	Howard st., opp. Centre.......	1896	28	208.6 x 245	24,155 sq. ft.	$2,100 00 1,500 00	$66,666 66	$203,639 00
Eastern High School.	Broadway and North ave............	1904	32	189 x 200	186.8 x 194.6	....	31,679 37	365,506 54
Western High School	McCulloh st. and Lafayette ave.	1895	25			....	....	....
	Old lot and building.........			230 x 97.9	Entire bldg.	....	30,666 66	132,000 00
	Administration building and lot	1895		230 x 140.8	320 x 80	....	40,000 00	....
	New lots and building........	1910		100 x 90		....	18,650 00	158,637 36
Polytechnic Institute	North ave. and Calvert st..........	1910	35	507 x 303	....	....	345,932 60	....
Colored High School	Penn. ave. and Dolphin st........	1893	26	80 x 144.6	56.4 x 138	....	15,000 00	26,000 00
C. H. School Shops...		1901		110 x 44.6		....	4,125 00	....
School No. 1.........	N. E. cor. Fayette and Greene sts.	1880	18	97 x 102	96 x 60 22 x 30	204 00 150 00	9,000 00	25,000 00
" " 2	Gough and Stiles sts.........	1911	24	220 x 92	80 x 151	....	24,252 17	106,221 97
" " 3.........	Eastern and Montford aves........	1880	17	100 x 150	52 x 136	350 00	....	24,000 00
" " 4	Hanover and Lee sts......	1896	16	50 x 104 128 x 76	Avg. 90 x 60	135 00	3,500 00 18,000 00	35,000 00
	Hanover and Lee sts. (addition)	1910		25 x 81	....	....	6,689 50	....
" " 5...	Broadway and Ashland ave.........	1876	16	120 x 120	56 x 120	600 00	....	....
" " 6.........	Ann st., nr. Canton ave.	1912	16	144 x 183	83.11 x 178.5	90 00	23,996 16	117,475 00
" " 7.........	Mullikin st., nr. Aisquith............	1864	11	75.9 x 100	45 x 64	540 91	2,651 50	5,000 00
" " 8	Caroline st., nr. Lombard.......... .	1888	14	105.5 x 150 (nearly)	90 x 58	114 00	6,200 00	18,000 00
" " 9	S. W. Cor. Fayette and Greene sts	1875	18	77.6 x 170 (nearly)	65 x 128	1,094 75	....	27,000 00

TABLE B—*Continued.*

SCHOOLS.	LOCATIONS.	Erected.	Class Rooms.	Size of Lot.	Size of Building.	Ground Rent.	Cost. Lot.	Cost. Building.
School No. 10	Hollins st., near Schroeder	1855	12	143.8 x 134	75 x 132	$200 00	$18,817 71	$75,099 02
	Addition, lot, new building	1905						
" " 11	Gilmor and Mosher sts	1886 1889	20	126.3 x 166.10	60 x 108 57.9 x 105	....	12,616 66	42,000 00
" " 12	Barre and Warner sts	1870	14	67 x 120	80 x 50	268 00	....	16,000 00
" " 13	Pat'rs'n Pk. av. & McElderry st.	1890	12	155 x 106	55 x 105	....	10,000 00	21,000 00
	Addition	1912	8		39.6 x 72.6			21,944 65
" " 14	Linden ave. and Wilson st	1882	14	150 x 105	56 x 120	....	14,000 00	21,000 00
" " 15	Saratoga st. and Carrollton ave.	1872	12	100 x 150	55 x 96	700 00	....	24,000 00
	Addition	1906						
" " 16	Harford and Ashland aves	1876	12	105 x 180	56 x 113	790 00	....	17,000 00
" " 19	Hollins st., nr. Monroe	1875	8	111 x 129.6	54 x 84	....	17,250 00	18,000 00
" " 20	Eden and Preston sts	1868	29	100 x 207	59 x 174	512 00	7,333 33	43,000 00
" " 21	Pennsylvania ave. and Robert st	1869	8	80 x 156	50 x 79	....	10,983 33	16,000 00
" " 22	Scott and Hamburg sts	1912	24	163 x 200	83.6 x 179.2	177 50	....	152,874 00
" " 23	Gough and Wolfe sts	1866	13	75 x 110	57 x 104	150 00	2,983 33	19,000 00
" " 24	Fait ave. and Patuxent st	1890	12	150 x 100	70 x 86	....	7,500 00	21,000 00
" " 25	Bond st., nr. Canton ave	1867	16	110 x 129.6	42 x 93 50 x 66	....	14,962 50	25,000 00
" " 26	Orleans and Bond sts	1874	10	84 x 75	56 x 65	126 00	4,500 00	15,000 00
" " 27	Fayette and Chester sts	1912	24	115 x 182.8	81.4 x 159.4	274 50	....	106,196 00
" " 28	Battery ave. and Clement st	1869	11	75 x 82	46 x 82	270 00	1,000 00	7,500 00
" " 29	Sharp st., nr. West	1886	12	114 x 155	55 x 103	....	9,500 00	21,600 00
" " 30	Hollins st., nr. Monroe	1875	16	97.6 x 129.6	54 x 112	700 00	12,500 00	16,000 00
" " 31	Schroeder and Pierce sts	1890	12	60 x 123.10	58 x 96	228 00	2,500 00	21,000 00

"	"	32........	Guilford ave. and Lanvale st......	1890	12	80 x 154	67 x 54 47 x 41	....	11,800 00	21,000 00
"	"	33	Light and Clement sts..........	1890	12	100 x 100	67 x 53 48 x 41	01	10,000 00	21,000 00
"	"	34........	Carey st. and Columbia ave	1896	12	100 x 160	58 x 120	....	6,416 66	30,000 00
"	"	35	Hanover and Winder sts......	1895	12	132 x 198	50 x 114	....	6,700 00	28,297 00
"	"	37........	Biddle st. and Patterson Park ave.	1895	12	150 x 165	65 x 89	....	8,500 00	25,000 00
"	"	38	Chesapeake and Hudson sts.........	1853	4	80 x 100	32 x 60	....	(Donated)	5,000 00
"	"	39	Carrollton and Riggs aves..	1888	12	97 x 157	52 x 97	....	7,000 00	19,000 00
"	"	40.......	Aisquith and Orleans sts.	1868	19	180 x 39 210 x 102	90 x 56 86 x 50	615 00	17,651 00	80,000 00
"	"	42........	Broadway and Bank st......	1888	20	100 x 141	101 x 39 52 x 87	44 44	3,333 33	30,000 00
"	"	43........	High st., nr. Fayette.........	1875	24	80 x 167	50 x 145	900 00	....	28,800 00
"	"	43 Br....	124 and 126 North High st...........	1903	3	30 x 136.6	....	....	5,000 00	Including bldgs
"	"	44........	Sharp st., nr. Montgomery..........	1869	14	100 x 155	54 x 104	600 00	....	18,000 00
"	"	45........	Greenmount ave. and Eager st....	1872	12	Average 77.8 x 152.8	56 x 100	600 00	....	17,000 00
"	"	47	Eastern ave and Patuxent st.......	1897	23	144 x 300	63 x 65 80 x 81	....	16,683 33	50,000 00
"	"	48........	Hollins and Monroe sts......	1875	12	127.6 x 129.6	Average 51 x 110	700 00	....	21,000 00
"	"	49........	1205 Cathedral st., with Gymnasium on Maryland avenue.........	Bought 1908	13	Average 60 x 227.6	Average 60 x 70 36 x 50	....	Lot and Bldgs.	60,000 00
"	"	50........	Gorsuch av. & Tyler st., Homest'd.	1889	4	42 x 90	27 x 52 11 x 20	....	1,000 00	4,500 00
" Old "		51. . .	York rd. Waverly, Repair Shop...	1889	16	100 x 200	134 x 45	....	4,000 00	14,500 00
" New "		51......	Ethelwood and Windermere aves.	1911	24	516 x 242	75 x 164	....	13,371 18	150,366 00
"	"	52........	Oak and Twenty-fourth sts....	1889	8	60 x 160	50 x 60	....	4,000 00	10,000 00
"	"	53	St. Paul and Twenty-sixth sts......	1897	16	200 x 123	160 x 99	....	21,666 66	60,000 00

TABLE B – *Continued.*

Schools.	Locations	Erected.	Class Rooms	Size of Lot.	Size of Building.	Ground Rent.	Cost. Lot.	Cost. Building.
School No. 54	Huntingdon ave., nr. Charles st.	1890	12	100 x 150	150 x 70		$7,000 00	$18,000 00
" " 54	Addition	1902	8					20,000 00
" " 54	Addition lot	1908		100 x 150			10,000 00	
" " 55	Chestnut and Fourth aves.	1890	12	176 x 220	58 x 110		5,000 00	44,433 12
" " 55	Addition lot and building	1902	12	48 x 120	64 x 156		1,200 00	46,769 42
" " 55	Lot	1910		175 x 225			6,075 68	
" " 57	Church st., nr. Merryman's lane	1889	6	88 x 245.6	26 x 134		1,300 00	700 00
" " 58	Woodberry ave., Woodberry	1889	8	Average 40 x 130	37 x 96		375 00	10,000 00
" " 59	Reisterstown road and Fifth ave (Irregular lot.)	1910	24	195 x 349	Average 75 x 152		5,500 00	117,077 62
" " 60	Francis and Clifton sts.	1893	25	120 x 150	55 x 83 90 x 113	$30 00	7,500 00	35,539 00
	Lot	1909		61.6 x 150			5,186 13	
	Addition	1908						24,512 00
	Addition	1911		181.6 x 150	39 x 135 27 x 40			56,110 00
" " 60 Br.	Clifton st., nr. Penna. ave		6	40 x 150	40 x 90		Nominal	
" " 61	Linden ave. and Konig st	1897	18	165 x 150	64 x 136		19,250 00	54,000 00
" " 62	Walbrook ave. and Smallwood st.	1902	23	150 x 210	72 x 144		5,000 00	65,203 81
" " 63	Ninth st. and Westwood ave.	1894	10	128 x 226.6	62 x 104		4,718 66	25,000 00
	Addition	1912	8		66.4 x 93.6			44,576 00
" " 64	Liberty road and Maine ave., Forest Park	1905	8	192.6 x 323	63 x 85		6,000 00	43,167 05
	Addition	1912	10					57,393 30
" " 64 Br.	Lot Garrison and Penhurst aves.	19...		200 x 200			11,543 97	

"	"	65	Calverton, Bloomingdale road	1893	10	76 x 169	60 x 86		1,500 00	15,500 00
			Additional lot, Irregular	1908		215.3 x 171.10			5,000 00	
"	"	66	Carroll, Old Frederick road	1892	4	61 x 238	52 x 27		2,000 00	4,500 00
"	"	67	Old Frederick road, Fairview ave.	1892	6	150 x 257	67 x 92		6,000 00	15,000 00
"	"	68	Millington and Lehman aves	1892	12	86 x 200	55 x 112		4,000 00	21 000 00
			Two additional lots	1910		76.3 x 86 200 x 115			6,532 65	
"	"	70	William st. and Warren ave	1912	24	190.9 x 140 New	82 x 161	175 00	35,083 63	123,950 00
"	"	71	Bond and Jefferson sts	1884	16	70 x 154.3	55 x 116	19 00	8,700 00	20,000 00
"	"	72	Ridgely st., nr. Fremont ave	1877	16	124.6 x 155	56 x 130	620 62		25,000 00
"	"	73	Aisquith st., nr. Lexington	1870	16	80 x 180	44 x 100	25 00	17,100 00	20,000 00
"	"	74	Twenty-second & Homewood ave.	1902	23	200 x 297	72 x 144		7,000 00	71,110 47
"	"	75	Carrollton ave. and Lexington	1886	22	49.6 x 103	48 x 133		10,000 00	20,000 00
			Carrollton ave., nr. Lexington	1860		88 x 160.4	48 x 118	400 00		20,000 00
"	"	76	Clement and Hull sts	1882	16	100 x 153	57 x 113 36 x 76		5,833 32	18,000 00
			Addition	1910	4					17,207 94
"	"	77	Washington st. nr. Fayette st	1871	16	93 x 134	40 x 67 65 x 51	372 00	3,487 50	20,000 00
"	"	78	Harlem ave. and Monroe sts	1893	17	157.4 x 249.6 A closed alley 10 x 249.6	56.4 x 143.6		17,500 00	30 500 00
"	"	79	Park ave. and Hoffman st	1892	24	120 x 150	100 x 147	1,020 00		35,000 00
"	"	80	Eden and Federal sts	1890	24	100 x 180	61 x 123 35 x 89		8,000 00	33,000 00
"	"	81	Gilmor and Presstman sts	1875	16	155.6 x 116.5	60 x 122	620 00		18,350 00
"	"	82	Mulberry st., nr. Fremont ave. (warehouse)	1868	14	87.8 x 134	55 x 115	350 67		15,000 00
"	"	83	Lakewood ave. and Orleans st	1902	24	200 x 145	70 x 144		9,166 66	63,475 90
"	"	83	Lakewood ave. and Fayette st.	1912	18	150 x 145	71 x 142		6,265 45	
"	"	84	Johnson and Heath sts	1902	21	148.3 x 214.6	70 x 144		10,000 00	69,218 35
"	"	85	Lakewood ave. and Oliver st	1904	24	150 x 320.3	71 x 150		4,382 75	92,296 85
"	"	86	Mulberry and Payson sts	1910	24	150 x 196.4	71 x 92.6 58 x 95		13,760 40	122,884 41

TABLE B—*Concluded.*

Portable Schools.	Erected.	Cost.
School No. 19, Hollins street, near Monroe (1 building)	1904	$1,400 00
" " 34, Columbia avenue and Carey street (1 building)	1908	1,400 00
" " 47, Eastern avenue and Patuxent street (4 buildings)	1913	5,600 00
" " 55, Chestnut and Fourth avenues (1 building)	1913	1,400 00
" " 64, Branch, West Arlington (2 buildings)	1912	2,800 00
" " 67, Old Frederick road (2 buildings)	1906-08	2,800 00
" " 68, Millington lane and Lehman street (2 buildings)	1913	2,800 00
" " 72, Ridgely street, near Barre (1 building)	1908	1,400 00
" " 77, Washington street, near Fayette (2 buildings)	1912	2,800 00
" " 83, Lakewood avenue and Orleans street (3 buildings)	1908	4,200 00
" " 91, Argyle avenue, near Lanvale street (1 building)	1908	1,400 00
" " 93, Baltimore and Aisquith streets (1 building)	1908	1,400 00
Colored High School, Pennsylvania avenue and Dolphin street	1904	1,200 00
School No. 107, Biddle street and Pennsylvania avenue (2 buildings)	1905	2,800 00
" " 109, Branch, Mount Olivet lane	1905	1,400 00
" " 112, Carey and School streets (2 buildings)	1905	2,800 00
" " 113, Federal and Carter streets (2 buildings)	1905	2,800 00
" " 113, Federal street near Greenmount avenue (2 buildings)	1906	2,800 00
" " 115, Talbot street, Waverly (2 buildings)	1908	2,800 00

TABLE C.

SHOWING LOCATION OF RENTED BUILDINGS AND LOTS, BY WHAT SCHOOLS OCCUPIED, AMOUNTS OF YEARLY RENTALS, AS OF JUNE 30, 1913.

SCHOOLS.	LOCATIONS.	YEARLY RENTAL
Baltimore City College, Annex	611 N. Eutaw street	$1,200 00
School No. 6,	Broadway Market Hall	....
" 50, Branch	Southeast corner Washington and Harrison streets	180 00
" 56	Druid avenue, Woodberry	500 00
" 58, Branch	Woodberry avenue, near Hooper avenue	600 00
" 97	117 and 119 Jackson Place $670-$550—	1,220 00
Colored High School, Annex	Dolphin and Lambert streets	330 00
" " "	1117 Pennsylvania ave.	900 00
" " "	Pennsylvania avenue, near Dolphin st. (main auditorium A. M. E. Zion Church)	420 00
School No 107, Branch	617 West Biddle street	1,000 00
" 109, Branch	Mount Olivet lane	60 00
	Mount Olivet lane (lot)	75 00
" 111, Branch	801 North Bond street	420 00
" 112, Branch	2018-2020-2022 Penna. ave. (2d and 3d floors)	480 00
" 113	Greenmount ave. and Federal st. (lots)	116 00
" 115	Talbot street, rear of School No. 115 (lot)	75 00
" 118, Branch	Garrison road, Calverton road and Edmondson avenue	300 00

REPORT OF THE SUPERINTENDENT.

BALTIMORE, June 30, 1913.

The Board of School Commissioners,
Baltimore, Md.

GENTLEMEN: In accordance with Article VI, section 4, of the rules of the Board of School Commissioners, I have the honor to submit a report for the scholastic year ending June 30, 1913.

If I were to express the condition of the schools in a single sentence, I could use no more appropriate expression than this: "Steady progress has been made."

One of the criteria of a good system of schools is its popularity. The tables appended will show that there has been a substantial increase in the enrollment of the pupils during the last scholastic year.

There is always danger in relying solely on figures. The attendance in a school or a school system may decrease and still the method of instruction and the pedagogical results become decidedly superior. The movement of population is a potent factor in affecting the size of school attendance. Possibly no other cause has had a greater influence on enrollment. There is a steady flow of population to the suburban sections adjacent to our city. As the sections beyond the confines of Baltimore become more populated, better equipped county schools are erected, and many pupils who lived in the city limits and whose parents find occupation there leave the city schools and attend these new and attractive county institutions. The efflux school population, however, has been exceeded by the influx population from the counties and other states to the extent of several hundred pupils. The excess of influx over efflux together with the natural increase of school population has brought about a total increase of 3,251 in this year's net enrollment over that of last year.

The movement of city population from one section to another affects our system in another way. Widening of streets, opening of new highways through built-up sections and consequent encroachments of business and manufacturing establishments upon residential sections cause many families to move into other parts of the city. Thus the older school buildings are depleted and schools in the newer sections are overcrowded. If the entire seating capacity of all our schools could be made use of, it would be found that our housing facilities would not be as inadequate as the number of portable schools indicates. Since old schoolhouses cannot be moved, and since there seem to be insurmountable difficulties in the way of compelling children to attend schools miles away from their homes, it will be necessary to keep on erecting new buildings in the populous sections, and some years must elapse before the city can return to the custom of erecting but one schoolhouse a year.

In the last annual report, mention was made of the fact that your Board had increased the number of superintendents by three and had abolished the system of group principals in the elementary schools. Certain advantages that were brought about by these changes were also set forth. Another year's experience has demonstrated that, as the superintendents become more and more acquainted with the teachers, the pupils, and the school patrons, together with the needs of their particular districts, and as the heads of elementary schools gain power in skillful and helpful supervision, the whole school system will become more effective and turn out pupils better equipped for the active duties of life.

The all important question of strengthening the curriculum has engrossed the attention of the Board of Superintendents, and progress has been made in formulating tentative outlines in certain subjects, and these outlines are being tried out in the classrooms.

Household arts have been installed at the Eastern and Western High Schools. Judging from the eagerness with which the girls have availed themselves of the opportunities offered in these new branches, the verdict must be that a long felt want has been filled.

Our statistician has again compiled various tables showing promotions from grade to grade, ages of pupils, length of time for completion of work, and other matters of interest. All these statistical tables are of sufficient importance and value to merit a very close study by the Board of Superintendents and the Board of School Commissioners.

The wider use of school buildings has been a subject of much agitation. There is no doubt that the amount of money invested in school buildings, especially in the most modern plants, does not bring sufficient return from the point of view of investment. The statement that large, commodious school halls and gymnasiums should be occupied more than five or six hours a day is heard over and over again. The fact is, however, that all our modern schoolhouses are already being used by such agencies as the Playground Association, the Public Athletic League, and many improvement and home and school associations. In some instances every night in the week is engaged for meetings. As far as the high schools are concerned they are often in use as long after the day's session as during the day's session. A still larger development of social and civic activities in the schools is recommended. Responsible leaders, however, must be had in the various neighborhoods. These leaders with the aid of superintendents and principals will carry out carefully prepared programs that have the sanction of the Board of Education. It must not be forgotten that the development of schools as social centers will add to the general expense. The pay of janitors and firemen, the cost of fuel and light, the wear and tear on furniture and buildings are some items that will cause increase. Most likely, too, if the social center idea is systematically developed, expert specialists in the field of work will have to be employed and salaries for such men and women must be provided.

For years educators have insisted on having manual training in the schools and perhaps today there is not a public school system that does not train pupils in handwork. It cannot be denied that boys and girls have derived great benefit from the instruction in the various branches of manual training work. Still public opinion seems to indicate that even now the schools are not preparing their pupils satisfactorily for life's work. It is argued that much of school work does not function for life, that is, does not make the child a better wage earner. The remedy lies in part, at least, in vocational training. Much more is demanded than is done in manual training centers, in vocational night school classes, in the household arts and commercial departments of the high schools. The solution of this problem will require serious thought and study and the helpful cooperation of public spirited citizens.

Closely connected with vocational training is vocational guidance. Live teachers have always been interested in guiding such pupils as were obliged to leave school early into industrial pursuits in which their capabilities might be developed profitably. It can hardly be said, however, that any systematized method for finding safe and profitable employment for pupils has been developed in our schools. Vocational guidance is being studied and worked out in various cities, emphasizing the fact that the educators' task does not end with the classroom, but follows the pupil so as to secure a rational adjustment to his work. The city of Edinburgh has worked out the problem very satisfactorily. Boston, New York, Chicago, Cincinnati, Cleveland, and other cities are actively engaged in perfecting a system of guiding their pupils vocationally. This new field of educational endeavor will challenge attention in our system.

The greatest and most urgent problem that confronts school administrators is the supply of teachers. Without well equipped and thoroughly trained teachers, it is impossible to maintain high standards and progressive efficiency of schools. The many avenues of professional employment that have opened up to women have not only caused young teachers to leave the work, but have decreased the number of students in our training schools. It has been necessary to make use of so-called emergency substitutes in filling vacancies; many of these are not trained in scientific methods and their work must necessarily be somewhat crude. I suggest two remedies to relieve this situation. The one is to raise the minimum and maximum salary of elementary teachers whereby an increased number of capable men and women shall be attracted to the profession. The second is to change the rules in such way that former teachers of ability and teachers from other systems will have less difficulty in entering our system. Abler emergency substitutes could doubtless be had for more liberal compensation.

The benefits of the public school in the course of the year have been extended to crippled children other than those at the hospital schools. Much brightness has been added to the lives of these unfortunate children by having them in school. It is hoped the work will be further extended.

Some provision has been made for the study and training of subnormal children. So long as our eleemosynary institutions shall be unable fully to care for these children, the public school system must do so. Separating these children and giving them instruction suited to their limited powers not only helps them, but also helps the normal children by affording them a greater share of the time of the teacher who has been relieved of the subnormal element.

My colleagues, the supervisors of the special departments, principals and teachers of elementary and secondary schools have worked zealously to perfect the system. The special reports contain items of interest, they indicate the progress that has been made, and they forecast plans for greater achievements.

Thanking the Board for helpful sympathy and cooperation in the cause of public education, and expressing appreciation of the aid extended by colleagues and teachers, I am,

Very respectfully yours,

FRANCIS A. SOPER,
Superintendent.

REPORT OF CHARLES A. A. J. MILLER.

Baltimore, June 30, 1913.

Mr. Francis A. Soper,
Superintendent of Public Instruction.

Sir: In the scholastic year 1912-1913 the secondary and training schools achieved good results. The one great problem—attaining the greatest good for the greatest number—kept principals and teachers busy and occupied both in and after school hours. I feel free to say that in the year just passed more students pursued their studies with credit to themselves and to their schools than in any previous year. In the female high schools hundreds of girls enthusiastically took up the household arts course. From the luncheons they served at various times one could judge that the instruction given in the course was successful.

Most of the aims outlined in last year's report have been reached; several, however, are still unaccomplished.

A salary scale for the members of the faculties of the Colored High and Training Schools has not as yet been established. I cannot refrain from stating that the salaries paid some of the teachers in the colored secondary schools are lower than those paid to teachers in the elementary schools. This condition has a very depressing and discouraging effect upon these secondary school teachers. I respectfully urge you to use your influence to have a salary scale established for these colored teachers before another year will have passed by.

The Teachers' Training School is still housed in its cramped quarters in School No. 70. Lack of a permanent, well-equipped home has been an obstacle to the growth of this school for the training of teachers. A stately edifice in itself does not make a populous school, but inadequate accommodations surely keep students from enrolling in a school. Since our white elementary schools depend for their teacher supply almost entirely upon the Teachers' Training School, every effort should be made to guard against losing even one student on account of insufficient room. In this connection I should like to advise that it would be well to advertise the school by distributing among the seniors of our secondary schools copies of a pamphlet giving the aims of our city training school, setting forth its course of study, and calling attention to the opportunities for employment within the reach of its successful graduates.

For several years criticisms have been heard in regard to the functions of secondary or high schools and the courses of study pursued in them. Most people admit "That the high school is the school of the people at large, and that it must serve the interests of the majority who do not go to college as well as the interests of the minority who do go. The greater numbers of those who go no further certainly require that their interests shall be guarded. On the other hand, the greater influence in society and the state of those who go on makes it important that every opportunity and every stimulus should be given them to reach their highest possible attainments. In most cases there is no necessity that the interests of either class should be neglected, although it may be necessary at times to use good judgment in striking a balance between them. The large schools can provide opportunities for all."

Our high schools do justice to both classes of students, those that go to college and those that do not. In accordance with the recommendations contained in the famous "Report of the Committee of Ten" made in 1893, and the resolution of the "Committee of Thirteen" passed in 1899, four of our high schools recognize the principle of election of courses. However, never is their unlimited election allowed; certain constants are always required.

Much time has been devoted to the study of what constitutes a proper high school curriculum and of how much choice should be allowed. In the coming year recommendation as to modifications of the courses now offered will be made. The adoption of these recommendations will insure greater school efficiency and will keep students from leaving before completing a chosen course.

The reports of the secondary school and training school principals, together with the usual statistical items, are herewith presented for your consideration.

Very respectfully yours,

CHARLES A. A. J. MILLER,
Second Assistant Superintendent.

REPORT OF CHARLES J. KOCH.

BALTIMORE, June 30, 1913.

MR. FRANCIS A. SOPER,
Superintendent of Public Instruction.

DEAR SIR: I have the honor to transmit the reports of the assistant superintendents on the condition of the elementary schools and to add the following personal statements:

The exhaustive report of the Statistician presents the familiar problems of grading, retardation, and repeating in striking form. These problems cause us the greatest concern; but we are encouraged to note from the report of the Statistician that there is a steady tendency toward their ultimate solution. This solution could be expedited by the establishment of smaller classes and a more suitable course of study. With the physical conditions now prevailing in most sections of Baltimore, we shall not be able to organize many small classes. We can, however, effect the necessary changes in the course of study; and I would recommend that the whole course be revised as to content and distribution, and that three general divisions be adopted—academic, industrial, and commercial. We have in Baltimore abundant opportunity for wise experimentation along these lines, and all that we need is the necessary legislation by the Board of School Commissioners.

DEPARTMENT OF SUPERVISION.

The plan put into operation last year appears to be working fairly well. The only criticism to which it seems exposed is that of the exceedingly large district which each assistant superintendent has to cover. When the heads of schools are made principals with larger powers, the work of the assistant superintendents will be materially lightened. I would recommend that each head of a building be made principal and that he be given ample powers of supervision and control. The assistant superintendents report that the teachers are industrious and cooperative in their work.

NIGHT SCHOOLS.

Tables 6 and 7 contain statistical information concerning the night schools. They are growing in popularity, and the work is being gradually systematized. The science classes at the Baltimore City College Night School, recommended in my last report, have been opened. The work done in these classes must be seen to be appreciated. No figures show the high class of students attending these courses. Attendance at the evening lectures was about the same as the year before. To extend this work a larger appropriation will be needed; and I would recommend that the sum of $500 be set aside for this work in 1913. The four classes in Spanish at the Baltimore City College have been very successful, but it is my opinion that there will not be a steady demand for a larger number of Spanish classes.

SPECIAL CLASSES.

The ungraded classes were in operation as last year. In my opinion these classes should be divided into ungraded classes and disciplinary classes, and we shall try to devise a scheme looking to this end. The classes for crippled children at Kernan's Hospital School and at the Children's Hospital School have held regular sessions and are greatly appreciated at those institutions. The additional class for crippled children authorized by the School Board and established at School No. 20 is also meeting a great need. Doubtless the next year will see this work greatly extended in other sections of the city. The special class for mentally defective children at School No. 7 is being conducted in conjunction with the Department of Psychiatry of the Johns Hopkins Hospital. Its work is best explained in the accompanying report of the teacher, Miss M. Belle Myers.

REPORT OF MISS M. BELLE MYERS ON THE OBSERVATION CLASS OF MENTALLY DEFECTIVE PUPILS, JUNE, 1913.

Total number enrolled	16
Withdrawn (1 to Owings Mills, 1 to country to live)	2
Number now on roll	14
Natural ages of children	8½-15 years.
Mental ages of children	5 - 9 years.

It may help to give an idea of the status of the class to make some statements regarding prominent characteristics in the pupils that retard progress and interfere with the general management of the classroom:

Of truants there have been	9
Noisy or excitable	5
Moody	5
Stubborn	6
Lazy	5
Cranky or quarrelsome	7
Destructive	5
Lack of control	9
Untruthful	7
Will steal	4

The obedient and easily managed number *four*. On the intellectual side, the powers of observation, attention, concentration, and memory are noticeably poor, though improvement has been noted. The entire effort has been towards the formation of habits rather than towards specific results, although the latter, of course, involve the former; and just here it is that every child in the class has made some improvement along some line or lines, with the exception of the one, who entered the last week of May. He has not yet caught the class spirit, having been absent several times. In some instances the improvement has been not only evolution but revolution. The improvement is gratifying in cases where the attention at first could not be held at all and now can be sustained long enough to produce a result and even carried over into things that are not of themselves attractive. One of the greatest successes attained in our class is found in the attitude towards work to be done and in the belief in ability to accomplish, some of the children apparently having for the first time found themselves. A striking characteristic of feeble-mindedness is to give up immediately when a difficulty is met. We have had many difficulties presented and have overcome many, but there are yet many more to be met.

Along the industrial and manual line great strides have been made. From never having used a tool up to the use and control of several in the production of useful articles, tells of the interest and success along this line; and too, the several industrial occupations, gardening, sweeping, dusting, setting the table, washing dishes, laundering tea towels, etc., that the children have undertaken, tend toward progress. It is in the manual and industrial work that great effort has been made to lengthen the span of attention, since the power of attending is the real measure of the child's mental control. Besides, by increasing and strengthening the child's constructive ability by the concrete manual work, the powers of attention and concentration can, to some extent, be carried over into the academic work. The motor memory, being the strongest phase of memory with the feeble-minded, has been called into service whenever practicable.

In academic work, the following shows the status of the children upon entrance and the improvement attained:

READING.

Three could not read (one can now read simple sentences).

Two could read very little, and with uncertainty and many mistakes (one has improved considerably).

Two made up reading from pictures, here and there hitting a word (can now read eighteen pages of primer).

One read first reader poorly (slight improvement).

Two read first reader fairly well (one has now undertaken second reader).

Three read third reader poorly (slight improvement in both).

Two read fourth reader fairly (improvement noted).

SPELLING.

Ten have improved; of the other four, two are trying to master the names of letters and two seem to have no memory at all for words or letters.

ORAL REPRODUCTION.

At first, several were afraid to try; now four have improved greatly, seven slightly, and four do little or nothing.

WRITTEN REPRODUCTION.

Here seven have advanced, and others cannot spell sufficiently to express their ideas.

WRITING.

Improvement noted in penmanship and in the general appearance of all written work, the placing upon paper, etc.

NUMBER.

Two had no conception of number beyond 3 (one can recognize and picture 4 and sometimes 5, the other has mastered 6).

Four could not add or subtract (two have come to add and subtract 1 and 2 from numbers less than 10).

One could add and subtract the smallest numbers (very little if any improvement).

One could add and subtract, also multiply small numbers (can now use slightly larger numbers).

Two could add, subtract, and multiply numbers to 20 (now have improved in addition and subtraction, but make many mistakes in multiplication and often forget completely what the terms subtract and multiply mean).

Four could use addition, subtraction, multiplication, and short division. Have tried long division, but not with much success. Two, probably three, appear to be reaching their limit along mathematical line.

To sum up briefly, improvement has been noted as follows:

	Marked.	Slight.	None.
Morals: Habits, characteristics, discipline......	8	5	1
Intellectual: Observation, attention, concentration, memory	10	3	1
Industrial and manual.........................	13	..	1
Academic	4	7	3

Increased care of materials and a better attitude towards school property have developed. The children have grown very proud and generally careful of "our things."

Respectfully submitted,

M. BELLE MYERS.

IMPROVEMENT OF TEACHERS IN THE SERVICE.

The teachers are showing the same steady desire for self improvement noted in my last report. All normal extension classes are well attended and an increasing number of teachers is taking special courses at the universities. I think experience shows that the desire for self improvement is not directly proportionate to extra pecuniary compensation.

SALARIES OF TEACHERS.

The superintendents of elementary schools have called your attention so frequently and insistently to the need of higher salaries in all branches of the elementary schools, and the present shortage in number of trained teachers in charge of classes is so harmful to the system, that I again urge you to advocate higher salaries for elementary teachers.

SCHOOL ACCOUNTING.

The work of the Bureau of Statistics and Research is so well represented in this report that I need simply suggest the need for more clerks in that department. The work of the Statistician is so valuable that he should be relieved of mere clerical duties as far as possible.

WIDER USE OF THE SCHOOL PLANT.

Baltimore will have to follow the lead of other cities in the wider use of school plants. A number of our new elementary buildings are especially adapted to this work; and I sincerely hope that plans will be inaugurated to make them of great service to the neighborhoods in which they stand.

Respectfully submitted,

CHARLES J. KOCH,
First Assistant Superintendent.

REPORT OF ROBERT W. ELLIOTT.

BALTIMORE, June 30, 1913.

MR. CHARLES J. KOCH,
First Assistant Superintendent.

DEAR SIR: I submit the following brief report of the work of District No. 1 of the elementary schools for the year ending June 30, 1913.

During the past ten months it has been the aim and purpose of the teachers and supervisor alike of the district to study carefully local as well as general conditions in order that the pupils attending our schools may be trained more efficiently as they pass from grade to grade, and that they may be promoted from this department with a more substantial equipment for secondary school work or for whatever field they may decide to enter. This has meant a critical study of the most effective plans and devices for successful teaching, and of drills for clinching that which has been presented. Unmistakable evidences of progress have been noted already. These encourage us to believe that the coming year will be even more fruitful of results. This, also, is the special work that has been outlined for the months that are before us.

The matter of providing convenient and comfortable accommodation for the pupils of our locality continues to be a very grave problem. Relief has been given in some sections, but in others conditions are growing worse steadily. School No. 65 (Calverton) is in the midst of a rapidly increasing population and we cannot hope properly to meet the demands of the occasion until a large new building replaces the one now in use.

The pupils of School No. 91 were transferred to classrooms in the neighborhood and this building was made a school for colored children. However, only temporary relief in the colored situation has followed, for crowded conditions still prevail. Besides, we continue to use the unsuitable buildings to which attention was called one year ago. Another large school is an urgent necessity.

A spirit of earnest cooperation is present everywhere. The principals are rapidly growing accustomed to their new duties introduced by the reorganization of the plan for supervision, and a faithful band of assistants is supporting them in every school. The pupils are attentive and industrious, and are making encouraging progress. The enrollment in some sections has diminished, but the total shows a gratifying increase.

Very respectfully,

R. W. ELLIOTT,
Assistant Superintendent, District No. 1.

REPORT OF ROWLAND WATTS.

BALTIMORE, June 30, 1913.

MR. CHARLES J. KOCH,
First Assistant Superintendent.

DEAR SIR: In my report of June 30, 1912, I referred to certain existing conditions and made suggestions as to the future development of the work. The crowded classrooms in certain schools was a matter of serious concern and has not as yet been entirely remedied, although the ten-room addition to Columbus School (No. 99) will furnish relief at that point. A report calling attention to other schools where the need of more rooms seems imperative is on file.

It is gratifying to be able to report that steps are being taken to grade the yards and playgrounds of Waverly (No. 51) and Alcott (No. 59) Schools, and I hope these improvements, as well as others of a similar character, may be completed very promptly.

The logical operation of the law raising the age of compulsory school attendance has been to increase the numbers in the fourth and fifth grades, making a larger number of teachers necessary. The eligible list of teachers has been exhausted and it is apparent that next year many classes will be in charge of emergency substitutes, many of them untrained and inexperienced. The fact that many pupils are forced back from work and others unwillingly remain in school, contrary to the desires of their parents, makes the task of the teacher the more onerous and success much more difficult to attain. The large classes and hard discipline have already made serious inroads upon the health of our teachers, many of them being on sick leave more or less extended. Perhaps a more serious aspect of the situation is the reflex influence of the teacher's ill health upon the pupils.

The call of other genteel forms of employment for young women who graduate from our high schools is becoming so immediate and so insistent that a steadily decreasing number will subject themselves to the rigorous training and long apprenticeship to which the teacher must submit before receiving a living compensation.

The crowded condition of our schools has made it practically impossible to form classes for children requiring special attention. Many children who could be educated are thus deprived of their opportunity and ultimately dropped out of school to become more or less a charge upon the community.

There are in our schools quite a number of children who are not educable but who become a burden and a serious menace to the normal children with whom they are compelled to associate. These unfortunate children should be provided for in properly equipped institutions where love and tenderness may find a way to help them without injury to their fellows.

I feel it my duty again to call attention to the very unsatisfactory manner in which we are compelled to handle the unruly children and again to suggest that plans be inaugurated for the more adequate care of these pupils.

The principals have given increased attention to supervision of classroom work and are manifesting a very helpful spirit toward the teachers. The schools are developing a commendable rivalry in many lines of endeavor.

The assistants to the principals are proving very helpful by taking the brighter pupils of certain grades in the regular studies while the classroom teacher devotes her time to special work with the slower pupils. The highest success cannot be attained by this plan where the overcrowded conditions prevent the separating of pupils. In some cases children born short in certain faculties have been allowed to advance with their classes in most subjects while they receive special help upon their weak points. While some of these may not complete the course and go to the high school, they will at least have gotten the greatest benefit from the time they have been in school and have not suffered the deadening influence of repeating, ad nauseam, things already known. In some schools I have promoted upon trial a number of pupils not fully recommended by their teachers. The results have been so encouraging that practically all of my schools have adopted the plan this June. As the parents and pupils are acquainted with the conditions of trial, the pupils may be induced to make good use of their summer vacation, and there is every reason to believe that at least one thousand pupils in District No. 2 will thus save a half year.

The number of applications for admission to the preparatory classes has not been so great as we had expected. Our patrons do not seem to desire Latin for children below the high school age. On the other hand, the possible saving of a year for those entering high school has appealed to many. The preparatory classes have, therefore, not been unprofitable.

We regret that we have not been able to introduce the division of courses into vocational, commercial, and academic, with ninth grades in the larger schools.

The same faithful, efficient service upon the part of teachers in my district, to which I made special reference in my previous report, has continued. The hard and at times discouraging conditions under which many of them work makes their cheerful compliance with every suggestion for the advancement of their pupils all the more noteworthy.

There has been a marked awakening of interest in the schools of District No. 2 upon the part of the patrons. Several new Home-School Associations have been formed and some of the existing organizations have renewed their interests. It is very gratifying to have the parents visiting the schools and cooperating with the teachers and sustaining the various activities of the school community. Several of the schools in the district are fast becoming neighborhood centers of civic as well as educational improvement.

School gardens, flower boxes, and other methods of making schools more attractive have received greater attention this year. It is a gratifying fact that District No. 2 has won many of the prizes offered for flowers in school yards and windows.

It is especially gratifying to note a marked increase in the pride the children are taking in the care of buildings and furniture. It is hoped that this improvement will continue until there shall be no more disfigured furniture and buildings in the city.

Respectfully submitted,

ROWLAND WATTS,
Assistant Superintendent, District No. 2.

REPORT OF ANDREW J. PIETSCH.

BALTIMORE, June 30, 1913.

MR. CHARLES J. KOCH,
First Assistant Superintendent.

DEAR SIR: In compliance with the rules of the Board of Education, I respectfully make the following report on District No. 3.

Upon a more intimate acquaintance with the problems in this district, I must reiterate my remarks about the accommodations. In all the schools in my charge there are but two vacant rooms, and in some of the buildings there are more classes than rooms, necessitating the unfortunate half-time classes. In two schools the children are housed in very uncomfortable quarters. I am glad to report, however, that there is ample relief in sight, through the erection of two large new schoolhouses for their accommodation. These we hope to occupy at the opening of the next year. Another building, the Colonel Tench Tilghman School, has had an addition of four rooms and an assembly hall, which will relieve its crowded condition for some time. While all the schools have been crowded, this year their accommodations were taxed beyond their limits by the enforcement of the new regulations of the Child Labor Law, which sent back to the schools all not of legal work age.

In such crowded rooms, in old buildings, with much wood and glass in evidence, it is difficult to maintain either proper ventilation or cleanliness. These conditions add much to the teachers' problems in the propagation of actual hygiene.

In spite of all these drawbacks, and in spite of the difficulties resulting from the new methods of distributing books and stationery, and indeed of many other hindrances (such as contagious disease, improper environment, and irregular attendance), and in spite of many changes in the teaching staff, the general advance in scholarship, in general interest in the schools, in harmony, in loyalty and zeal has been so marked among the teachers that it calls for especial commendation. The teachers are pleased with the new course of study so far as it has been furnished them and they are eagerly expecting the remainder.

The progress in the classes is as marked as it is among the teachers. By the restoration of thoroughness and accuracy much progress has been made and in a short time the benefit of this method will be evident. Children are taught according to their ability and not according to their grading. In this way true progress is made.

During the year a class of subnormal children was established at School No. 7 under Miss Belle Myers. The Psychiatric Department of the Johns Hopkins Hospital assisted very much in classifying and testing them. In September we hope to raise the standard of mentality to such a point that true progress will be evident.

In the coming year I can only hope that prevocational work may be introduced into the schools in order to provide for the hypermotor child. Were these followed up with continuation schools, the "wider use of the schools" movement would have reached its limit from the educational side, except for lectures.

With the hope that these two or three items may be made realities within the coming year, this is

Respectfully submitted,

ANDREW J. PIETSCH,
Assistant Superintendent, District No. 3.

REPORT OF JOSEPH C. HANDS.

BALTIMORE, June 30, 1913.

MR. CHARLES J. KOCH,
First Assistant Superintendent.

DEAR SIR: During the past scholastic year I have had the opportunity to become better acquainted with conditions in my district. Among the principals and teachers there is a spirit of cooperation and optimism that is highly pleasing to me. It is also plainly evident that the teachers' relations to their pupils are undergoing a complete change. They are realizing that the welfare of the school does not come largely from influences or reforms from without, but from powers that reside within the human breast. As a result of this kindly attitude, there are very few real differences between the teachers and patrons. This does not necessarily mean that the teachers are becoming weakly indulgent and seeking to win their pupils without pedagogical skill and tact.

Neighborhood conditions and problems peculiar to individual schools are being studied and solved without feeling that rules and uniformity in the course of study are being sacrificed. It has been found necessary to allow considerable discretion in carrying out the curriculum on account of the great differences in the school population of my district. As a result of this special study, there is a great increase in interest and average attendance on the part of the pupils.

One of the most praiseworthy illustrations of the study of the health of the pupils is the movement which has led to the establishment of the open-air class at School No. 76. "The interest of the community in its own welfare was the strongest factor in the movement," was the comment of the president of the Maryland Society for the Prevention of Tuberculosis when they set aside five hundred dollars to assist in the work. This interest was developed through the Parents' Club connected with the school, through petitions signed by more than fifteen hundred residents, and through the unselfish and faithful devotion of the principal and teachers of the school. With a part of the money donated, blankets were purchased and made into twenty-five Eskimo suits by the teachers and mothers during the winter evenings. On account of the delay in securing the land in the rear of the school building, it has been decided to put the class in the school yard, using a tent as shelter in inclement weather. Valuable assistance was rendered by the school physician, who also secured the promise of a special nurse from the Health Department. The interest in the movement is still unabated, and the successful opening of the class in the fall is eagerly anticipated.

The strict enforcement of the Compulsory Education Law has forced into our schools many over-age boys and girls who do not wish to take the regular work of the grades. In many of the schools, these pupils present very difficult problems; and the ingenuity and patience of teachers and principals are sorely taxed. Some special method whereby these pupils might be collected together in classes should be devised so that they may be enabled to pass the educational test of the Labor Bureau without unnecessary delay.

There is an increasing tendency on the part of the new teachers to seek assignment in schools near their homes. The low salaries, the high cost of living, and the ever increasing demands upon the teachers for self improvement render it necessary for many of them to save car fare. Since there are but few teachers who live in my district, a difficult problem is presented as to the method whereby it may be possible to do justice to the pupils. The same difficulty presents itself in the case of the emergency substitutes who must be called upon when eligible teachers are not available. The whole problem is one of the most serious with which I have to deal and should be given very careful consideration without delay.

The new course of study in arithmetic has been carefully tested, and there is abundant evidence that the emphasis which is placed upon the fundamental processes is highly satisfactory to teachers and patrons. I find that the best results are being obtained where oral arithmetic is being systematically taught from rationally prepared problems in connection with the daily written work of each grade. The teaching of the simple process of analysis which runs through the whole science of arithmetic is leading to intellectual power in the pupils.

Principals are getting more in touch with conditions in their respective schools since it has been possible to give many of them assistance for at least a part of the day. Teachers seem to welcome the kindly suggestions that are being made from time to time, and the general outlook for constructive work is decidedly encouraging.

Respectfully submitted,

Joseph C. Hands,
Assistant Superintendent, District No. 4.

REPORT OF ATTENDANCE DEPARTMENT.

Baltimore, June 30, 1913.

Mr. Francis A. Soper,
Superintendent of Public Instruction.

Dear Sir: Enforcing the requirements of the new Compulsory Education Law and the new Child Labor Law increased the difficulties of the Attendance Department in the scholastic year 1912-1913. Tact and firmness were required to overcome the opposition to these new laws.

On December 1, 1912, when the new Child Labor Law went into effect, the permits of 1,018 children were revoked. It fell to the lot of the Attendance Department to see that these boys and girls were reentered in school. This was not an easy task. Many visits had to be made before the final report could be drawn up as to the results of this particular piece of work. Most of the children returned to school. In a few cases, to bring about this return without inflicting too great loss upon the family income, the Federated Charities were asked to provide school pensions. The following table will show the results of the investigation:

Report on Permits Revoked January 1, 1913.

Number of children home (legally)	11
Number of children withdrawn by doctor's certificate	11
Number of children at work with permits	17
Number of children moved out of city	27
Number of children committed to institutions	2
Number of children died	1
Number of children not located	23
Number of children living in county	13
Number of children returned to school	913
Total number of children reported to Attendance Department	1,018

The work of the attendance officers is concentrated largely upon the truants, suspected truants, and irregular attendants of the public schools. Annually parochial and private schools are notified by circular that truancy and irregular attendance cases reported by mail will be investigated by the Attendance Department. Very few of these schools take advantage of this offer. When the officers visit the schools, cases are reported. Unfortunately, however, not many visits can be made to these private schools on account of lack of time and the limited number of officers.

The percentage of attendance for the year was the same as that of last year, 90 per cent. There is a steady diminution of persistent truancy among the white children. This is due to the vigilance of the attendance officers and to the corrective influence of the Parental School. It also acts as a deterrent to many pupils tempted to truancy, since they have learned to know that persistent truancy may bring about a temporary loss of liberty. The establishment of a permanent home for the Parental School marks a new epoch in its history. Superintendent Read and his assistants hope to enlarge the sphere of usefulness of the institution.

At my request, Miss Rosabel E. Hall, Chief Attendance Officer, has prepared the following statement on certain phases of an attendance officer's work:

"Every attendance officer endeavors to learn the true cause of a reported case of truancy or absence, and to work on that cause. Everything that can be done to promote regular school attendance and the moral, mental, and physical uplift of the children with whom they come in contact becomes the duty of an attendance officer. When she encounters difficulties in the homes, she meets them with sympathetic intelligence. When necessary, she brings to a home the tubercular or visiting nurse, the friendly visitor of the Charity Organization Society, or any other uplifting agency that can help the home and thus the particular absent or truant child. When an attendance officer discovers that a child is sick and is not receiving proper medical attention, this condition is referred to the Visiting Nurses' Association. The nurse visits the home and makes every arrangement for the proper and continued care of the child. Thus the child is benefited in two ways: from the standpoint of health and that of more regular attendance.

"Many children are absent from school on account of lack of clothes or shoes. These poverty cases are referred to the Federated Charities, which investigate and provide what is necessary. By this means children whose absence would be protracted or who would not be sent to school at all, are provided for and the term of absence is shortened.

"If it is found that children are in homes where the surroundings are immoral or where they have improper care, the help of the child-welfare societies is invoked.

"Parents of feeble-minded children are urged to send them to the special ungraded class for sub-normals or to the Asylum at Owings Mills."

From this account it will be seen that attendance officers are more than mere house-callers; that, in fact, they are earnest social workers. Much more could be accomplished by them, if their respective territories were not so large. I therefore once more plead for more attendance officers. To this request I must add another, that a parental school for colored children be established at an early date.

Very respectfully,

CHARLES A. A. J. MILLER,
Second Assistant Superintendent,
In Charge of Attendance Department.

REPORT OF THE DIRECTOR OF THE TRAINING OF TEACHERS.

BALTIMORE, June 30, 1913.

MR. FRANCIS A. SOPER,
Superintendent of Public Instruction.

DEAR SIR: The work of the Teachers' Training School and of the Colored Training School during the past year has shown some advance over that of the previous year. The defects of equipment are still serious, and many important divisions are working under limitations which are frequently wasteful. I wish to recommend that a special inquiry be made into the needs of this department of the service with the intention of outlining a general plan, part of which can be carried into effect at once and serve as a basis for further advances to be brought about as rapidly as possible.

I wish again to urge the following recommendations:

(1) A well equipped children's school should be furnished the Teachers' Training School in which a part of the observation, participation and practice work can be done.

(2) Adequate equipment in furniture, library books, laboratory material, gymnasium, etc., should be provided for each training school.

(3) The number of white teachers of practice should be increased so as to give each teacher charge of but one room. This would make it possible for each student to have taught in two grades instead of one, as at present is the case.

(4) The organization of the system in such a way as to make possible an entering class in the Teachers' Training School each February.

(5) The provision of a small annual appropriation for books, which can be expended as new material appears without the machinery of requisition.

(6) The publication of a hand-book giving in considerable detail information concerning the course of study and organization of the Training Schools.

Respectfully submitted,

FRANK A. MANNY,
Director of the Training of Teachers.

PAPERS RELATING

TO THE

TEACHERS' TRAINING SCHOOL

FACULTY, 1912-13.

FRANK A. MANNY,

DIRECTOR OF THE TRAINING OF TEACHERS

and

TEACHER OF SOCIAL EDUCATION.

Theory Department

FLORENCE KELLOGG, B. S.,
History of Education, History.

EDITH GRACE RICE, B. S.,
Hygiene, Mathematics, Construction Work.

GRACE HART HARE, A. B.,
Reading, Literature, Language and Grammar, Penmanship, Music.

MIGNON LEVIN,
Child Study, Psychology, Principles of Teaching, Junior Participation.

LYDIA E. SPENCE,
Geography, Nature Study.

Assistant Supervisors of Practice Teaching

CARRIE M. SUMWALT,
FLORENCE M. LAYMAN,
FLORENCE E. BAMBERGER.

Teachers of Practice Classes

M. JOSEPHINE KRAGER,
FIRST GRADE.

BLANCHE MACCARTHY,
FIRST GRADE.

ANNIE C. WILLIAMS,
FIRST GRADE.

IDA V. FLOWERS,
FIRST GRADE.

HELEN M. JOHNSON,
SECOND GRADE.

ISABELLE M. JOHNSTONE,
FOURTH GRADE.

FLORENCE R. BONN,
FIFTH GRADE.

JULIA F. BECK,
SEVENTH GRADE.

LIDA L. THOMASON,
THIRD GRADE.

VIRGINIA WIGHTMAN,
THIRD GRADE.

Instructors in Special Subjects

HENRIETTA G. BAKER, Music.

OLIVIA KEACH, Drawing.

C. F. E. SCHULZ, Physical Training.

GEORGE M. GAITHER, Tool Work.

ENROLLMENT FOR THE YEAR

September, 1912—June, 1913.

Number of new pupils admitted during year—		
Boys	4	
Girls	152	
		156
(Seniors, 69: Boys, 1; girls, 68. Juniors, 87: Boys, 3; girls, 84.)		
Number transferred to Class II	7	
Number withdrawn from service	27	
		34
Number of pupils belonging, June, 1913		122
Net roll, June, 1913		122
(Seniors, 53: Boys, 1; girls, 52. Juniors, 69: Boys, 3; girls, 66.)		
Average number of pupils belonging during year		130
Average attendance during year		124
Percentage of attendance for the year, based on average number belonging		95

REPORT OF THE PRINCIPAL OF THE BALTIMORE CITY COLLEGE.

BALTIMORE, June 30, 1913.

MR. FRANCIS A. SOPER,
Superintendent of Public Instruction.

DEAR SIR: The established curriculum of the Baltimore City College was not varied during the year from September, 1912, to June, 1913, and the results of its administration were in the main successful. One hundred and sixty students were graduates at the commencement held Monday, June 16, 1913. This is an increase of 22 over the previous year and is probably more than will be graduated for several succeeding years. Up to the conclusion of the current year, the graduating requirement has been 150 credits, while hereafter graduates will have to make 170 credits, an average of about 43 credits to a year, if the course extends to four years, and probably more than any graduate can successfully accomplish in three years. This exclusion of three-year graduates will materially diminish their number. Quite a number of this year's graduates have secured certificates for colleges and universities—yet more for professional schools, such as medicine, law, dentistry, etc. The requirements for entry into these latter schools have been more definitely fixed than formerly, and very materially increased. There is now a regular Examining Board and a regular official whose duty it is to pass upon candidates for admission to Maryland professional schools. The Baltimore City College is among the secondary schools whose certification, under decision of the Examining Board, admits to these colleges without examination.

The Commercial Department has furnished its usual quota of young men to take part in business pursuits. The work of this department, I think, can be improved by the following changes: omit algebra in the first year and give a more extended training in commercial arithmetic. Let the student choose between German and Spanish, as a foreign language. Make a course covering two years for which certificates can be given, said course to omit foreign language, to be strictly confined to training for office work, beginning stenography and typewriting in the first year.

The school spirit of the City College remains wonderfully fine, showing both interest and loyalty. A Student Board, elected by the students themselves, has assumed the successful administration of the discipline in the yard, halls and lunchroom, and the conduct of the students has shown marked improvement in those places. Moreover, the judgments and decisions of the Student Board, subject to review by the principal, have been cheerfully accepted by their fellow students. The practice of holding weekly assemblies has had the effect of unifying and emphasizing school interests, and has therefore been very beneficial. It appears to me that the function of this assembly may be extended in the future by presenting fresh and wholesome talks from the active men of the world. Indirectly, such expressions would have some influence, not only upon the boys' characters, but upon the selection of a vocation in life.

Respectfully submitted,

WILBUR F. SMITH,
Principal.

PAPERS RELATING
TO THE
BALTIMORE CITY COLLEGE.

FACULTY, 1912-1913.

WILBUR. F. SMITH, *Principal.*
RICHARD H. UHRBROCK, PH. B., *Vice-Principal.*
JOSEPH H. ELLIOTT, *Secretary of the Faculty.*

English

ANDREW H. KRUG, PH. D.
BENJAMIN E. FLEAGLE, A. B.
FLOYD T. HOLDEN, A. B.
GLENN OWENS.
JOSEPH E. GREEN, A. B.

Modern Languages

CHARLES F. RADDATZ,
German.

J. KONRAD UHLIG, A. B.,
German.

C. OTTO SCHOENRICH,
German.

*KURT SEYFERTH, M. D., A. M., PH. D.,
German and French.

ARISTO M. SOHO, PH. D.,
Spanish and French.

Latin and Greek

GERARD E. MORGAN, A. M.,
Head of Department. Latin.

PHILIP H. EDWARDS, PH. D.,
Latin.

EDWARD T. HILLS, A. B.,
Latin.

GEORGE A. STEELE, PH. D.,
Greek and Latin.

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*Since resigned.

Mathematics

STEPHEN F. NORRIS,
Head of Department.

RICHARD H. UHRBROCK, Ph. B.

*ALEXANDER HAMILTON.

CHALMERS S. BRUMBAUGH, A. B.

HAROLD H. BALLARD, Ph. D.

History

PERCY L. KAYE, Ph. D.,
Head of Department. History, Political Economy, Civics.

FRANK R. BLAKE, Ph. D.,
History.

S. R. WALLIS PARRISH,
History.

Science

LESLIE H. INGHAM, Ph. D.,
Head of Department. Chemistry.

PHILIP H. FRIESE,
Physical Geography and Physics.

ROBERT I. HAZELTINE, A. B.,
Botany, Zoology and Biology.

PHILIP L. ROBB, B. S.,
Chemistry.

CHARLES C. PLITT,
Biology.

BERNARD H. JACOBSON,
Laboratory Assistant.

---

*Since resigned.

Commerce

JOSEPH H. ELLIOTT,
Head of Department. Bookkeeping and Commercial Subjects.

JOHN A. KRATZ, A. B.,
Stenography and Typewriting.

JOSEPH D. NOONAN,
Bookkeeping, Commercial Arithmetic, Penmanship and Commercial Geography.

Drawing

B. WHEELER SWEANY.

WALTER R. GALE.

Physical Training

JOHN LORETT.

Librarian

ALICE W. REINS.

Theme Reader

EARLE LINDSAY RODGERS.

Clerk

R. POULTON TRAVERS.

ROLL ITEMS 1912-13.

1.	Number of pupils returned, from September, 1912, to June, 1913, from the previous school year		577
2.	Number admitted by promotion from elementary schools before February		261
3.	Number admitted by transfer from other secondary schools		14
4.	Number admitted from elementary schools, February, 1913		71
5.	Number admitted from private or parish schools		19
6.	Number admitted from public schools outside of Baltimore		48
7.	Number admitted from other sources		5
8.	Total number in attendance during the year		995
9.	Number permanently withdrawn during the year	192	
10.	Number transferred to other schools	4	
			196
11.	Total net roll, June, 1913		799
12.	Number graduated, June, 1913		160
13.	Number graduated, February, 1913		...
14.	Total number of graduates during the year		160
15.	Average number belonging during 1912-13		832
16.	Average attendance during 1912-13		761
17.	Percentage of attendance (based on 15 and 16), 1912-13		91.5

SEPTEMBER, 1912—JUNE, 1913.

Table showing subjects in Baltimore City College, the number of classes in each subject, and the number of students pursuing each subject.

SUBJECTS.	First Year.		Second Year.		Third Year.		Fourth Year.	
	Number of Classes.	Number of Students.	Number of Classes.	Number of Students.	Number of Classes.	Number of Students.	Number of Classes.	Number of Students.
English	9	402	6	250	6	215	4	122
German	5	231	6	183	4	165	2	58
Latin	7	300	5	207	4	141	2	50
French	.....	.....	3	123	3	113	2	47
Spanish	.....	.....	1	19	.....	.....	.....	.....
Greek	.....	.....	1	33	1	13	1	3
History	10	363	2	46	2	70	3	117
Political Economy	.....	.....	.....	.....	.....	.....	1	37
Mathematics	12	489	6	202	6	272	1	27
Physical Geography	5	178	.....	.....	.....	.....	.....	.....
Botany	8	333	.....	.....	.....	.....	.....	.....
Zoology	.....	.....	.....	.....	.....	.....	.....	.....
Biology	.....	.....	2	83	.....	.....	.....	.....
Physics	.....	.....	.....	.....	2	103	1	12
Chemistry	.....	.....	.....	.....	2	94	1	20
Bookkeeping	3	122	2	66	1	29	.....	.....
Commercial Arithmetic	3	131	.....	.....	.....	.....	.....	.....
Commercial Geography	.....	.....	.....	.....	1	35	.....	.....
History of Commerce	.....	.....	.....	.....	.....	.....	1	19
Commercial Law	.....	.....	.....	.....	.....	.....	1	30
Stenography	.....	.....	2	96	1	32	1	18
Typewriting	.....	.....	2	96	1	32	1	18
Drawing	10	455	7	254	4	89	1	28
Physical Training	11	418	6	144	.....	.....	1	22
Business Management	.....	.....	.....	.....	.....	.....	1	22

GRADUATES, 1913.

Edwin Wallace Aaron
Michael Aaronsohn
Albert Zimmerman Aldridge
Nehemiah Altman
Frank Oscar Anderson
Julian Carr Anderson
Charles Summerfield Austin, Jr.
Charles Albert Bacon
Lawrence Henry Baker
Robert Pitt Barham
Melvin Baumblatt
William Brown Baxley
David William McKinley Bien
Henry Thompson Bosee
Robert Thomas Botts
Biays Shannon Bowerman
Wilmer Brinton Bowman
Albert Potts Brower
Guy Bertram Brown
Lester Adolph Bueschel
Louis Techembach Cahn
John Calvin Carney
Harry Roland Carroll
Edgar Parlett Clark
Ross Alexander Cohn
Bernard Hermann Conn
Dudley George Cooper
Harry Leon Cooper
Milton Henry Courtney
Charles Maier Cover
Robert Curlander
Reuben Davidson
Harry Dischler
Hugh Latimer Dryden
Ernest Edlavitch
Albert Eisenberg
Ira Brownold Fader
Herbert Ernest Fankhanel
Charles Vernon Farrow
William Fensterer
Warfield Monroe Firor
Allen Bernard Lawrence Fisher
Harry Ferd. William Frank
Leon Frank
Louis Frank
Mitchell Jacob Friedman
Nelson Francis Friz
William James Fulton
James Edward Gibson
Manual Gutman Gichner
Hyman Glass
Charles Franklin Goldberg
Emanuel Gorfine
Howard Jennings Gorman
Howell Corbin Gwaltney
Charles Lambert Hanley
Maurice Alexander Hanline
John Harold Hargreaves
Clifford John Hartung
Oregon Benson Helfrich
George John Hemmeter
Henry William Herman
Charles Edwin Hodes
Herbert Stanley Holland
LeRoy Horn
Marcus Clair Horning
Chester Ezekiel Hurwitz
Richard Herbert Ireland
Israel Isenberg
Winters Ruth Jones
Jacob Kartman
Paul Emmart Keedy
David Duff Kennedy
Walter Kettlewell
George Frederick Kindley
Norris Carroll King

Archibald Rowland Kirch
Ferdinand Andrew Korff
Louis August Moyer Krause
Abraham Krieger
Samuel Land
Frederick Ferdinand Landsberg
William Raymond Lenderking
Charles Edward Lenz
Herbert Levy
Leonard Lowenthal
Richard Lloyd Tilghman Lurman
Marshall Hampton McCord
William Archibald McKewen
Norman Rogers McVeigh
Alvin Phillip Maass
William Victor Maconachy
Abraham Marcus
Jerome Mark
Israel Michelson
Samuel Benjamin Miliman
Frederick Miller
Joseph Miller
William Foss Mohr
Joseph Clinton Newman
Edwin Chandler Newman
Milton Henry Niedel
Joseph Edward Norris
John Patrick O'Connor
Frank Nevin Ogden
Harry Oliker
Robert Adrian Pilson
William Davis Pitt
George Harry Pouder, Jr.
Earl Jerome Powell
James Weblin Ransone
Homer Mance Respess
Philip Earl Reth
Paul Emerson Reynolds
Jesse Millard Rine
Charles Bernard Rockwell
Raphael Rosen
Emil Rosenthal
Felix Rothschild
Saul Edward Rudo
George William Schilling
William James Schilling
Isidor William Schimmel
Edwin Schoenrich
William Henry Schulze
Terrell George Selby
Abram Mitchell Seligman
Louis Shayte
Joseph Siegel
Louis Silberstein
Francis Noel Smith
Stuart Cecil Smith
Chauncey Kenneth Smullen
Alexander Alan Steinbach
William Stanley Sterling
Robert Nelson Stevens, Jr.
Henry Lobe Straus
John Byron Strawbridge
Edward Merceron Stuart
Paul Windom Sutton
Walter Lee Taylor
Charles Howard Tichner
Milton Tiefenbrum
Benjamin Tobias
Lyle Douglas Logan Hanna Utts
Arthur Mitchell Wainwright
Hilbert Amil Waldkoenig
Oates Crosby Saunders Wallace
Leonard Robinson Watkins
Alexander Ashley Weech
George Louis Wellington Weis
Paul Louis Welke
Louis Beck Weller
Frederick Cornelius Wenzel
Howard Lawrence Wheeler
Vernon Joseph White
Leslie Stewart Wilson
James Lee Wroten
Richard Hood Yates
Francis Edwin Yestadt

RECIPIENTS OF PEABODY PRIZES.

OF THE FIRST GRADE—$100 EACH.

Hugh Latimer Dryden
Lawrence Henry Baker
Harry Ferdinand William Frank

OF THE SECOND GRADE—$50 EACH.

Herbert Levy
Reuben Davidson
William Raymond Lenderking
Louis Beck Weller

RECIPIENTS OF SCHOLARSHIPS IN THE EATON & BURNETT BUSINESS COLLEGE.

Herbert Levy
Louis Silberstein

REPORT OF THE PRINCIPAL

OF THE

BALTIMORE POLYTECHNIC INSTITUTE.

BALTIMORE, June 30, 1913.

MR. FRANCIS A. SOPER,
Superintendent of Public Instruction.

DEAR SIR: I submit the following brief report of the work of this school covering the period from September, 1912, to July, 1913.

The school has a fixed technical course of four years, designed to prepare students for profitable employment in the wide field covered by civil, mechanical, electrical, chemical, and mining engineering, should circumstances or inclinations prevent them from seeking a higher education after graduation.

The results of the past year have in no sense fallen below the standard of accomplishment of the past. Of the hundred and five graduates, thirty-two entered higher institutions of learning, the remainder entering at once into engineering employment at satisfactory compensations.

In no instance did any of those who entered higher institutions receive less than full sophomore standing.

The disadvantage of a divided school and the lack of an assembly room continued throughout the year, but it is an assured fact that the new building on North avenue will have reached a degree of completion that will enable the entire school to be conducted there under one roof by the time set for reopening in September, 1913. There is every reason to believe that the new and improved equipment in the new building, which is unsurpassed by any similar school in the country, will lead to more efficient instruction in the future.

Very respectfully,

WILLIAM R. KING,
Principal.

PAPERS RELATING
TO THE
BALTIMORE POLYTECHNIC INSTITUTE.

FACULTY, 1912-1913.
(As of June 30, 1913.)

WILLIAM R. KING, U. S. N., *Principal.*
WILLIAM H. HALL, A. M., *Vice-Principal,*
Head of Department of Science.
SAMUEL M. NORTH, B. S.,
Head of Department of English and Modern Languages.
CHARLES E. CONWAY,
Head of Department of Engineering.
HENRY A. CONVERSE, PH. D.,
Head of Department of Mathematics.
PHILIP DOUGHERTY, A. M.,
Acting Head of Department of History and Civics.
ROSA LEBOVITZ, *Secretary.*

FACULTY AND STAFF BY DEPARTMENTS
DEPARTMENT OF ENGINEERING.

CHARLES E. CONWAY, *Head of Department.*

Allen L. Malone,
Julius Zieget, C. E.,
Samuel P. Platt,
Henry Bogue, Jr., A. B.,
Allen B. Souther, B. S.,
William G. Richardson,
George M. Gaither,
George N. Anderson,
Laurence F. Magness,
Clarence P. Bolgiano,
Harry C. Finck,
Wilmer A. DeHuff, C. E.,
Charles A. Pettit,
Charles F. Goob,
Wilson T. Ballard,
Charles E. Dennis, Jr.,
Rudolph Michel.

DEPARTMENT OF MATHEMATICS.

HENRY A. CONVERSE, PH. D., *Head of Department.*

Oliver Bacharach,
William H. Wilhelm, A. M.,
Harvey S. Houskeeper, A. B.,
Thomas F. Garey, A. M., LL. B.,
Alfred B. Haupt,
Max F. Lehman, A. B., A. M.,
A. E. Sable, B. S., C. E.,
James N. Galloway, A. M.

DEPARTMENT OF SCIENCE.

WILLIAM H. HALL, A. M., *Head of Department.*

J. Edward Broadbelt, Ph. G.,
Irving L. Twilley, A. M.,
James B. Arthur,
J. Vinton Hobbs,
Howard H. Elliott,
E. Howard Askew.

DEPARTMENT OF ENGLISH AND MODERN LANGUAGES.

SAMUEL M. NORTH, B. S., A. M., *Head of Department.*

J. Ward Willson, M. D.,
Edward Reisler, A. M.,
Elmer M. Harn, A. M.,
William P. Stedman, A. B.,
George H. Schwartz, A. B.,
W. W. Baden, Ph. D.,
Harry P. Porter, A. B., A. M.,
H. L. Caples, A. B.,
Ferdinand C. Kuehn, A. B.,

DEPARTMENT OF HISTORY AND CIVICS.

PHILIP DOUGHERTY, A. M., *Acting Head of Department.*

Isaac L. Otis, A. B.,
Charles F. Ranft, A. B.,
Charles E. Adams.

ROLL, 1913.

Number of new pupils admitted during the year	1,106
Number of pupils admitted by promotion	89
Number of pupils admitted by transfer from the Baltimore City College	4
Total number of pupils during year	1,199
Number of pupils withdrawn during year and not re-entered	178
Number of pupils transferred to Baltimore City College	15
Number of graduates, 1913	105
Number of pupils belonging, June, 1913	969
Number of pupils in care, June, 1913	1,006
Average number of pupils belonging during 1913	1,008
Average attendance during year 1913 (92.85%)	936

Table showing the number of students pursuing the different subjects of the course of the Baltimore Polytechnic Institute and the time devoted to each subject.

SUBJECTS.	First Year.			Second Year.			Third Year.			Fourth Year.		
	Number of Students.	Number of Sections.	Periods Per Week.	Number of Students.	Number of Sections.	Periods Per Week.	Number of Students.	Number of Sections.	Periods Per Week.	Number of Students.	Number of Sections.	Periods Per Week.
Steam Engineering	.....	.....	.....	.....	.....	.....	152	5	4	108	4	3
Mechanics	.....	.....	.....	.....	.....	.....	.....	.....	.....	108	4	5
Mechanical Drawing	480	13	4	266	8	4	152	5	4	108	4	4
Practice	480	13	4	266	8	4	152	5	4	108	4	4
Algebra	480	13	4	266	8	3	.....	.....	.....	.....	.....	.....
Geometry	480	13	4	266	8	2½	.....	.....	.....	.....	.....	.....
Trigonometry	.....	.....	.....	266	8	1	152	5	3	.....	.....	.....
Analytic Geometry	.....	.....	.....	.....	.....	.....	152	5	4	.....	.....	.....
Calculus	.....	.....	.....	.....	.....	.....	.....	.....	.....	108	4	5
Physics	.....	.....	.....	266	8	4	.....	.....	.....	.....	.....	.....
Electricity	.....	.....	.....	.....	.....	.....	152	5	3	108	4	4
Chemistry	.....	.....	.....	.....	.....	.....	152	5	2	108	4	4
Composition and Rhetoric	480	13	3	266	8	2	.....	.....	.....	.....	.....	.....
Literature	480	13	3	266	8	2½	152	5	3	.....	.....	.....
History	480	13	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
German	480	13	3	266	8	3	152	5	3	.....	.....	.....
Civics	.....	.....	.....	266	8	4	.....	.....	.....	.....	.....	.....
Technical English	.....	.....	.....	.....	.....	.....	.....	.....	.....	108	4	1

GRADUATES.

February, 1913.

Abram F. Bacharach
Lawrence A. Baldwin
J. Carroll Bartholow
Carlyle E. Boone
Leigh H. Brodie
Earl A. Constam
Hyman A. Danzig
E. Stanley Davis
Elmer J. Elgert
Curtis L. Garrett
Edward A. Hampson
John N. Heiner
Walter Hess
James Hopkins
Isidore Isaacs
E. E. Kaiser
Laurence C. Kaspar
William J. Kellinger
Harry Korff
Benjamin Lasinsky
L. T. Lenderking, Jr.
Francis Lentz
Julius Levine
Frank Lucke
Paul B. Milburn
R. W. Moore, Jr.
Carroll F. Morrison
Clifton Pruett
Charles L. Pumphrey
Milton Smith
Bernard J. Trautman
Spencer S. Unglaub
C. H. Walker
William F. Walker, Jr.
William E. Wood

June, 1913.

William T. Abercrombie
Lloyd W. Ashley
R. Kenneth Barnes
C. Rawlings Beaumont
Charles A. Becker
Milton J. Boyer
A. Clifford Carlton
Frank H. Carter
Solomon Cohen
Harry A. Collett
Laurence E. Collins
Parlett Davis
Clarence Earle
George F. Gephart
Lawrence F. Gilpatrick
Benjamin Goldberg
Harry A. Goldberg
William McL. Graham
Charles H. Grauling
Robert Tyson Greer
Charles F. Gross
Robert F. Gunts
George K. Haderman
Otto H. Hamm
Walter H. Harrison
William Heaphy
Earl A. Heckmer
Clarence Heisse
Robert Hicks
John B. Hill
Irving Hoffman
Ira L. Houghton
Stedman Houghton
Elmer H. Johnson
Kenrick Kelly
William F. Kuehle

William F. Leineweber
Jacob Levin
Alfred C. Levis
J. Wardale McAllister
Arthur S. McCabe
Cyril Markley
Louis Meyerhoff
W. T. Meushaw
Harry Miller
L. W. Miller
William H. Osborn
Vincent Panettiere
Isaac Poloway
Oden B. Pyle
Allen J. Quinan
Reinaldo Ramirez
Milton Reiner
Frank G. Reinhardt
Lawrence T. Reinicker
Elmer C. Reynolds
Leslie Sebald
John J. Seidel
Robert W. Sheckells
Walter Simon
Carroll T. Sinclair
Jacob Sindler
S. LeRoy Thomas
Ernest Tschudy
Herman Wacker
W. Norman Wherrett
W. H. Wilhelm
John A. Williams
W. Clarke Wroe
Howard E. Ziefle

REPORT OF THE PRINCIPAL OF THE EASTERN HIGH SCHOOL.

BALTIMORE, June 30, 1913.

MR. FRANCIS A. SOPER,
Superintendent of Public Instruction.

DEAR SIR: I beg to submit the following report on the work of the Eastern High School for the term 1912-1913.

I wish first of all to emphasize by repetition at this time a few of the suggestions made in my last report. The necessity for a carefully formulated two-year commercial course becomes increasingly evident year by year. Inquiry addressed directly to pupils who failed to continue their high school course brought the information that about half of them are attending business colleges in order to get the requisite professional equipment in a shorter time than is possible under our present arrangement. I feel sure that practically all of these would have been saved to the high school if the course had been adjusted to their needs. The outline of the proposed two years' course which is in your hands provides for eight hours a week of shorthand and typewriting, begun in the first year, instead of five hours a week, begun in the second, as in the present course. At the close of the second year, the pupil will have the necessary equipment for entering the business world. Two years' additional work is offered to those who are able to continue; nor do I think that the number who would complete the course would be reduced by the change.

The advisability of appointing heads of departments is in my opinion no longer debatable, and I strongly urge that such appointments be made as soon as possible. Virtually, the positions already exist in this school, as the senior teacher in each of the large departments is responsible for its routine. She should, however, have official recognition, an adequate advance in salary, and clearly defined duties.

I wish also again to emphasize the great value of the library to the school, if in the charge of a trained librarian. The assistance which such a person can give to the pupils in their reading and reference work, the system which she brings into the conduct of the detail of the library, the technical knowledge which she possesses in all matters pertaining to library management, and which is always at the service of teachers and pupils, make her presence in the school an absolute necessity. It is highly specialized work, and the salary should be commensurate with the service rendered.

Probably the most important single advance during the year has been the establishment of a course in household arts. The cooking department only has been in operation during the past term, and only first and fourth year pupils have been permitted to take it. During the coming year, however, the equipment for the housekeeping department will be installed, and all pupils will be given the opportunity to enroll.

The commencement in June, 1913, was notable in that the largest class ever sent out from the school—177—received diplomas. This number represented 50 per cent of those who had entered the school four years before.

An experiment which promises to prove successful is the establishment of a summer school to be held during the coming summer for pupils who wish to make up deficiencies or to gain a half-year in one or more subjects. The preliminary enrollment for this school is over 100.

Increasing emphasis has been placed upon the educational importance of the weekly assemblies, of school dramatics and athletics, and of student cooperation in the conduct of the school. All these agencies can be made of great value if properly controlled.

The aim of the faculty of the school is to make an ever closer adjustment of the work of all departments to the needs of everyday life, without for a moment losing sight of the cultural purpose of the high school course. I wish to commend most heartily the spirit of harmony and mutual helpfulness among the teachers of the school, and to express my appreciation of the cordial cooperation extended to me at all times by the superintendents.

Very truly yours,

ERNEST J. BECKER,
Principal.

PAPERS RELATING

TO THE

EASTERN HIGH SCHOOL.

FACULTY, 1912-1913.

ERNEST J. BECKER, PH. D., *Principal.*

KATHERINE M. LEWIS, *Vice-Principal.*

English

ALICE J. DuBREUIL, A. B.

ANABEL E. HARTMAN, A. B.

RUTH HASLUP, A. B.

KATHERINE E. MOOG, A. B.

ALICE G. MALLALIEU, A. B.
(and Mathematics).

ALICE E. CALDER, A. B.

Mathematics

KATHERINE M. LEWIS.

HARRIET E. EBAUGH, A. B.

ELISABETH G. WHITE.

CAROLINE F. BECKER, A. B.
(and Astronomy and Commercial Geography).

A. NAOMI CROWL, A. B.
(and English).

History

LEONORA E. CARPENTER,
United States History and Civics.

REBECCA BELLE BROOKS,
Greek and Roman History.

THEORA J. BUNNELL, A. B.,
European History.

Latin

MARGARET GARRETT.

ELEANOR R. HOSKINS, A. B.

ROSA BALDWIN, A. B.
(and English).

ATLANTIS R. HULL, A. B.
(and English).

Modern Languages

ERNEST J. BECKER, PH. D.,
German.

AGNES E. BUCHHOLZ,
German.

SOPHIE SEYFERTH,
German.

AMELIE GRAF,
German and French.

ELSA CONRADI,
German.

Science

IDA NEUMANN,
Botany, Biology and Zoology.

KETURAH BALDWIN, A. B.,
Chemistry and Physics.

HELEN K. BACHRACH, A. B.,
Laboratory Assistant.

LORETTA M. BOLLMAN, A. B.,
Laboratory Assistant.

Commercial Subjects

ANNA GRACE KENNEDY, LL. B.,
Stenography and Typewriting.

THEODOCIA B. MAHON,
Bookkeeping and Commercial Arithmetic.

ROSE O. WICKES,
Stenography and Typewriting.

MARY R. TRAVERS (Special Substitute),
Bookkeeping, Commercial Arithmetic, Stenography and Typewriting.

WILLIAM D. ROYCROFT, LL. B., (Part Time),
History of Commerce, Business Management, Commercial Law,
Economics, Civics.

Drawing

ELIZABETH M. MAKIBBIN.

OLIVE C. SLATER.

Physical Training

LILLIA B. OTTO.

MABEL H. FLAHARTY.

Household Arts

CARRIE M. THORNBURG, B. S.

Music

ANNA D. C. KRIEGER.

Librarian

KATHARINE G. GRASTY.

Theme Reader

CLARA T. RILEY.

Clerk

MADELEINE M. THOMPSON.

ENROLLMENT IN 1912-1913.

Number of pupils returned in September, 1912		594
Number admitted by promotion from elementary schools		262
Number admitted by transfer		77
Number admitted from schools other than Baltimore elementary schools		26
Total number in attendance during the year		959
Number withdrawn during year	123	
Number transferred to other schools	6	
		129
Enrollment, June, 1913		830
Number graduated, February, 1913		7
Number graduated, June 18, 1913		170
Average number belonging during 1912-13		817
Average attendance during 1912-13		761
Percentage of attendance during 1912-13		93

Table showing the subjects taught in the Eastern High School, the number of classes in each subject and the number of pupils pursuing each subject.

SUBJECTS.	First Year.		Second Year.		Third Year.		Fourth Year.	
	Number of Classes.	Number of Pupils.	Number of Classes.	Number of Pupils.	Number of Classes.	Number of Pupils.	Number of Classes.	Number of Pupils.
Algebra	11	370	.....	.....	2	31	1	8
Arithmetic	5	116	.....	.....	.....	.....	1	30
Astronomy	.....	.....	.....	.....	.....	.....	2	64
Biology	.....	.....	2	100	.....	.....	.....	.....
Bookkeeping	5	112	2	72	2	50	.....	.....
Botany	1	30	.....	.....	.....	.....	.....	.....
Business Management	.....	.....	.....	.....	.....	.....	1	32
Chemistry	.....	.....	.....	.....	.....	.....	3	81
Civics	.....	.....	.....	.....	.....	.....	5	163
Commercial Geography	.....	.....	.....	.....	2	41	.....	.....
Commercial Law	.....	.....	.....	.....	.....	.....	1	29
Drawing	9	288	6	184	5	114	2	81
English	9	322	8	213	6	169	5	130
French	.....	.....	2	38	2	57	.....	.....
Geometry	.....	.....	5	162	1	6	.....	.....
German	5	106	6	186	4	135	1	21
History	5	145	1	35	4	117	5	174
History of Commerce	.....	.....	.....	.....	.....	.....	1	11
Household Arts	7	146	.....	.....	.....	.....	5	113
Latin	6	187	6	149	2	26	1	41
Music	2	288	2	192	1	158	1	154
Physical Geography	1	29	.....	.....	.....	.....	.....	.....
Physical Training	6	173	5	181	2	76	2	45
Physics	.....	.....	.....	.....	2	63	.....	.....
Political Economy	.....	.....	.....	.....	.....	.....	1	35
Stenography and Typewriting	.....	.....	3	92	3	67	1	31
Trigonometry	.....	.....	.....	.....	.....	.....	1	16
Zoology	.....	.....	1	45	.....	.....	1	38

GRADUATES, 1913.

February Class

Bessie Cabden Bacon
Mary Elizabeth Bond
Edna Margaret Chase
Bessie Elizabeth Cohen
Erma Eisenberg
Esther Freilachoff
Elizabeth Potter

June Class

Tena Adler
Helen Leslye Winifred Alvather
Lucy Alvey
Marie Angela Andrew
Marie William Assau
Mildred Marie Bahn
Marie Helen Barnickol
Helen Parker Barron
Viola Bauer
Amelia Elizabeth Becker
Edith Wilson Bell
Esther Selma Benjamin
Rose Lucile Benjamin
Ida Pauline Benson
Minnie Elizabeth Bernstein
Lula Alverta Bollinger
Eva Madonna Boring
Florence Estelle Bornemann
Alberta Regina Bradyhouse
Ethel Bright
Lily Evelyn Buck
Irene Viola Burbett
Lillian Crombie Burroughs
Florence Marie Bush
Blanche Marie Canby
Ruby Belle Carpenter
Hildegarde Carroll
Hazel Lucille Clarke
Ruth Abigail Clifford
Emma Mary Codd
Friederica Conrad
Ellen Elizabeth Cooper
Lillie Dorothy Cooper
Tillie Davidson
Maria Wood Davis
Leah May Denham
Mary Edna Dick
Mary Christine Dobler
Elma May Drenning
Ruth Esther Dunbracco
Ethel Mary Edwards
Elsie Gertrude Eitel
Mary Marguerite Elgert
Charlotte Cumings Ellis
Grace Ruth Fiddeman
Oda Showers Fisher
Martha Janette Fleagle
Mary Isabell Frames
Rebekah Galoon
Florence Ethel Gees
Theresa Bertha Gier
Marie Louise Giles
Marjorie Handricks Gillilan
Caroline Louise Glantz
Mamie A. Glass
Belle Sophia Goldberg
Mary Julia Gontrum
Rebekah Gordon
Ella Anna Gregor
Alice S. Grolock
Gertrude Harmatz
Lily Pauline Harn

Olive Ruth Hecker
Helene Lucille Hedian
Marie Ellen Cecelia Hibbitts
Emilie Mae Hilbert
Gertrude H. Hillegeist
Etta Hirschmann
Ruth Torrance Horsfull
Marguerite Virginia Hunter
Mary Elizabeth Winifred Hysan
Edith Mary Joesting
Anne Frances Johnson
Elizabeth Marian Jones
Hilda Mary Kaji
Helen Brierwood Keener
Nanetta Louise Kispert
Genevieve Marie Knecht
Miriam Elizabeth Kohler
Grace May Kornmann
Eva Elizabeth Korter
Katherine Marguerite Krause
Katherine Louise Krebs
Leonore G. L. Krueger
Flora Krulewitch
Rena Krumm
Dorothy Oakley Laws
Annette Maria Lawson
Carrie Leibensperger
Helen Levy
Irene Morforde Lewis
Lillie Edna Lyons
Margaret M. J. Madigan
Mary D. Maguire
Virginia C. B. Markley
Anna H. Matsinger
Emma Rose McCormick
Elsie McDougall
Minnie Reppert McGee
Florence Marie Mears
Edna Louise G. Meyer
Annette Amelia Miller
Margaret Naoni Miller
Easter Marie Mitchell
Agnes M. Moore
Florence Marguerite Mooyer
Letitia Ella Mumma
Marie Barbara Novak
Elizabeth Friederica Obrecht
Lillian Louise Obrecht
Elsie L. Ohlgart
Florence Margaret Oliphant
Barbara Pabst
Beulah Lavinia Peters
Minnie Marie Pfaff
Mary Alice Philips
Gertrude Phillips
Erna Alma Pielke
Florence Ethel Plitt
Ruth Margaret Powell
Cornelia Owen Rever
Anna Florence Rodgers
Katharine Maria Rokos
Irene M. Roll
Ivah Cecile Ross
Mary Joyce Russell
Helen Louise Sandrock
Lucille Louise Schamberger
Edith Ruth Schefflein
Myrtle Elizabeth Schlarb
Estelle Marie Schubert
Marie Schultheis
Ethel May Scott
Alice Graham Shields
Pauline Marie Shinn
Bertha May Shipley
Fannie Beatrice Shochet
Ella M. Short
Rosa Shulman
Freda Lillian Siegel
Anna Silberstein
Katherine Sinskey
Bernice Violet Smith
Elizabeth M. A. Smithson
Mary Ozora Spicknall
Frances Phyllis Spooner

Irene Emma Stalknecht
Cora Dorothy Stewart
Helen Irene Stocksdale
Anna Ethlon Thomas
Theo Marie Thompson
Vera J. Thompson
Mary Hope Thornton
Margaret Elizabeth Thorpe
Hilda A. Trout
Mildred Elizabeth Tyson
Bessie Urwick
Eleanora Warfield
Lena Ruth Weber
Marjorie Jefferson Weber
Sadie Weisberg
Helen Elizabeth Wellener
Lorell Ingram Werner
Lissetta Elizabeth Westermann
Ruth Norwood Whiteside
Mary Louise Wiedefeld
Lucy Alice Wilson
Edith Anna Wisotzkey
Bessie Aurelia Wright
A. Blanche Wright

RECIPIENTS OF PEABODY MEDALS, 1913.

First Grade.

Hilda Mary Kaji
Mary Julia Gontrum
Florence Marie Mears
Lucille Louise Schamberger
Marie Barbara Novak

Second Grade.

Helen Lucille Hedian
Mary Joyce Russell
Edith Wilson Bell
Eva Madonna Boring
Lissetta Elizabeth Westerman
Lula Alverta Bollinger
Esther Selma Benjamin
Elma May Drenning
Irene Emma Stallknecht
Grace Ruth Fiddeman

HONORABLE MENTION.

Ethel Mary Edwards
Charlotte Cumings Ellis
Erna Alma Pielke
Minnie Marie Pfaff
Ella M. Short
Martha Janette Fleagle
Pauline Marie Shinn
Edith Mary Joesting
Anna H. Matsinger
Mary Louise Wiedefeld

RECIPIENTS OF SCHOLARSHIPS.

Goucher College of Baltimore.

Goucher College Scholarship	Helene Lucille Hedian
Alumnæ Scholarship	Hilda Mary Kaji
Eastern High School Scholarship	Mary Julia Gontrum

EATON & BURNETT BUSINESS COLLEGE.

Mary Joyce Russell
Theresa Bertha Gier

REPORT OF THE PRINCIPAL OF THE WESTERN HIGH SCHOOL.

BALTIMORE, June 30, 1913.

MR. FRANCIS A. SOPER,
Superintendent of Public Instruction.

DEAR SIR: I beg leave to present, herewith, a report upon the work of the Western High School for the scholastic year 1912-1913.

At the opening of the scholastic year, instruction in the Department of Household Arts was begun. For the first half year only the course in cookery was offered to the pupils. In February, after the necessary equipment had been installed, work in Household Management was added. Although the work in the Department of Household Arts was elective, the total enrollment of pupils was over 600. It would seem from this that the pupils of the school appreciate the opportunity afforded them to secure instruction in this very necessary and useful work.

In my last annual report I made the suggestion that the advisability of dividing the curriculum into about five or six "courses" be carefully studied. I am still of this opinion, and at the present time I am preparing a plan of this kind, which I shall be pleased to submit to you as soon as it is completed.

Another suggestion made last year, that of allowing a certain number of credits for approved work in music pursued in such institutions as the Peabody Institute, will be included in the plan mentioned above.

The Western High School has for some years been experimenting in the matter of pupil government, or rather cooperation of the pupils in matters of school government. There has been created a Student Committee consisting of representatives elected from all the classes in the school. This Student Committee meets regularly to consider such matters as are within its jurisdiction. Up to the present time, the results have been very satisfactory, and it is hoped that in the future the scope of the Student Committee's activity may be increased.

The teachers of physical training feel that there should be a physical examination of pupils in order that the work may be adapted to the needs of individuals. In addition to this, there should be always in attendance, in a high school of this type, some one who has the necessary medical training to be of service to the pupils. Such a person could also furnish instruction in hygiene. I suggest that you consider the advisability of appointing, for regular attendance at this school, a physician who should give pupils the necessary examination before they undertake work in the gymnasium, and who should also give instruction in hygiene. Such a plan is in successful operation in the two girls' high schools in Philadelphia. At the present time, the only physical examination of pupils made in the high school is that of fourth-year pupils preparing to enter the Teachers' Training School. This is conducted by Doctors Lilian Welsh and Mary Sherwood.

I hope that the School Board will continue to grant appropriations for the purchase of books for the Library. I am pleased to report that the number of pupils using the Library has greatly increased, and that the results of this branch of the school's work are highly satisfactory.

Respectfully submitted,

David E. Weglein,
Principal.

PAPERS RELATING

TO THE

WESTERN HIGH SCHOOL.

FACULTY, 1912-1913.

DAVID E. WEGLEIN, A. M., *Principal.*

English

IMOGEN GEORGE.
M. THERESA DALLAM.
AUGUSTA F. DITTY.
LIZETTE W. REESE.
BESSIE E. KLEIBACKER.
E. ANNA HARRISON, A. B.
MOLLY W. WOOD, A. B.
MIRIAM W. SHAW, A. B.

History

DAVID E. WEGLEIN, A. M.,
Civics.
LAURA J. CAIRNES, A. B.
SUSIE H. HOLLSTEIN.
MARGARET E. ENGLAR, A. B.
(and Algebra).
M. ELLA HARRISON, Ph. B.

Mathematics

ANNE E. WELTY.
CHARLOTTE A. JONES, A. M.
E. LEOLA DIXON.
ANNABEL WHITE.
M. ELIZABETH HOLDEN, A. B.
(and English).

Latin

MARY B. ROCKWOOD, A. M.

ANNIE W. NICHOLSON.

MARY E. HUDGINS.

LUCY E. MURRAY, A. B.
(and English).

Modern Languages

LOUISE E. THALWITZER,
German.

EMILIE S. REINHARD, A. B.,
German.

ELIZABETH C. REMMERT,
German and French.

EUGENIA CASPARI,
German (and English).

MIRIAM ELFRETH,
French.

ANNIE G. WETTERMANN,
French and German.

Commercial Subjects

GRACE I. GILL.

DELIA R. ALFORD.

MARGARET G. PERRY.

ELIZABETH MINNICK.

Science

LELIA H. SMITH, A. B.,
Astronomy, Physical Geography, Botany (and Algebra).

MARY H. MULLIKIN, A. B.,
Physics and Chemistry.

PEARL I. HEAPS, A. B.,
Biology.

EVELYN W. BETTS, A. B.,
Laboratory Assistant, Chemistry.

HAZEL PATTEN, A. B.,
Laboratory Assistant.

FRADELIA A. RICE, A. B.,
Laboratory Assistant.

RUTH A. TAYLOR, A. B.,
Part time substitute.

Drawing

ROBERTA DAVIS.

ELISABETH HELSBY.

LAURA L. ALFORD, A. B.,
(and English).

Physical Training

FLORENCE W. THOMPSON.

MARY A. FOLEY.

HAZEL V. DENNIS.

Household Arts

HELEN B. PALEN.

I. CLAIR SANSBURY.

Music

HENRIETTA G. BAKER.

Librarian

MARY S. WALLIS.

Clerk

ELIZABETH K. SCHELDT.

ENROLLMENT IN 1912-1913.

Number of pupils returned in September, 1912		808
Number admitted by promotion from elementary schools		529
Number admitted by transfer		6
Number admitted from schools other than Baltimore elementary schools		99
Total enrollment during the year		1,442
Number graduated in September, 1912	1	
Number graduated in February, 1913	12	
Number withdrawn during year and not re-entered	188	
Number transferred to other schools	6	
		207
Net roll, June, 1913		1,235
Number graduated, June 19, 1913		171
Total number graduated during year		184
Average number belonging during 1912-13		1,192
Average attendance during 1912-13		1,129
Percentage of attendance during 1912-13		94.36

Table showing the subjects taught in the Western High School, the number of sections in each subject, and the number of pupils pursuing each subject.

SUBJECTS.	First Year.		Second Year.		Third Year.		Fourth Year.	
	Number of Sections.	Number of Pupils.	Number of Sections.	Number of Pupils.	Number of Sections.	Number of Pupils.	Number of Sections.	Number of Pupils.
Algebra	16	638	2	60	2	72	.....	.....
Astronomy	.....	.....	.....	.....	.....	.....	1	29
Biology	.....	.....	3	65	.....	.....	.....	.....
Bookkeeping	6	200	3	70	1	26	.....	.....
Botany	2	85	.....	.....	.....	.....	.....	.....
Business Management	.....	.....	.....	.....	.....	.....	1	23
Chemistry	.....	.....	.....	.....	.....	.....	4	106
Civics	.....	.....	.....	.....	.....	.....	5	169
Commercial Arithmetic	6	198	.....	.....	.....	.....	.....	.....
Commercial Geography	.....	.....	.....	.....	1	27	.....	.....
Commercial Law	.....	.....	.....	.....	.....	.....	1	20
Drawing	16	554	11	381	6	198	3	67
Economics	.....	.....	.....	.....	.....	.....	1	20
English	16	638	11	336	7	225	5	160
French	.....	2	2	91	4	114	2	72
Geometry	.....	.....	7	233	2	61	.....	.....
German	6	216	9	262	5	140	1	47
History	9	359	4	134	5	127	5	169
History of Commerce	.....	.....	.....	.....	.....	.....	1	11
Household Arts	14	316	6	125	5	99	5	120
Latin	9	376	7	243	2	64	2	49
Music	3	587	2	392	1	254	1	199
Penmanship	6	200	.....	.....	.....	.....	.....	.....
Physical Geography	2	85	.....	.....	.....	.....	.....	.....
Physical Training	14	370	9	234	4	118	3	61
Physics	.....	.....	.....	.....	4	135	.....	.....
Review Mathematics	.....	.....	.....	.....	.....	.....	1	39
Stenography and Typewriting	.....	.....	4	97	2	63	1	17
Zoology	.....	.....	1	42	.....	.....	1	36

GRADUATES, 1913.

February Class

Selma Beck
Emily Wilkins Blunt
Florence Gove Ingham
Birdie May Jackson
Minnie May Marsden
Irene Isabelle McLaughlin
Mary Arlease Price
Florence Louise Stegman
Eva Van Daniker
Nettie Voloshen
Nellie Irene Warren
Rita Sybilla Winkleman

June Class

Naomi Aaronson
Alma Lorraine Ayler
Lida Ann Ayres
Elinor Robertson Baden
Gladys Mary Baggett
Ethyle Mae Barling
Elise Leonide Barry
Kathryn Laura Behrens
Margaret Luise Beitzel
Mildred Belt
Dorothy Anna Benthall
Valerette Munzebrock Berndt
Elizabeth Beyer
Edna Margaret Biddison
Mazie Bolden
Mary Hollingsworth Bowerman
Dahlgren Bradley
Sophia Lottie Brady
Ella Bird Brown
Helen Cornelius Brown
Agnes May Browning
Marie Elmont Browning
Lillian Louise Buck
Ruth Elizabeth Buckley
Anna MacDougall Campbell
Elizabeth Gustava Childs
Doris Virginia Church
Eva Clark
Elizabeth Thomas Cline
Margaret Adele Cline
Maude Emma Coale
Henrietta Cobb
Luray Colley
Amelia Phillips Constantine
Maude Halcyon Corkran
Louise Murray Diggs
Eva Elizabeth Dorrida
Mabel Adeline Dowden
Grace Lillian Ebert
Alvina Cortes Eppler
Lula Anna Fargo
Sara Emily Fisher
Mary Margaret Foster
Louise Sewall Frantz
Anna Arline Freeburger
Ruth Gees
Dorothy Getz
Esther Morse Gilmer
Ida Glatt
Lillian May Gresham
Eva Lenore Griffith
Virginia Zeller Hachtel
Madeline Rohr Hamburger
Doris Ruth Harker
Ray Hartogensis
Mary Helen Harvey
Anna Louise Hasenkamp
Jeannette Evelyn Hecht

Emily Helber
Miriam Hendrix
Erma Grace Henry
Ruth Evelyn Herring
Ruth Marriott Hildebrand
Edna Cochran Hiss
Elizabeth Lucy Hiss
Linda Lawrence Hitchcock
Eleanor Hollstein
Ruth Pardoe Hunter
Lila Mae Ide
Jennie Joffe
Cecil Ellen Johnson
Mary Schooley Johnson
Katharine Sarah King
Olive Augusta Knighton
Minnie Bruning Knipp
Gertrude Kollmeyer
Lillie Koplowitz
Blanche Koshland
Eltin Marian Kuhnle
Bertha Benthall Larrabee
Marcia Lewis Leach
Helen May Lerian
Ida Gertrude Lippy
Ethel Lipschutz
Irene Louise Loewer
Emma Marion Maconachy
Irene Charlotte Maisch
Elsie Marie Magers
Frances Josephine Mann
Mabel Irene Mansdorfer
Edna May
Marie Ashley McCann
Marie Loretta McGovern
Ida Fowler Mealy
Beatrice Meyer
Myrtle Marie Meyers
Grace May Miller
Meta Helena Miller
Ginevra Dorothy Munding
Mary Helen Neilson
Hortense Rebecca Niedel
Mary Rosalie O'Brien
Dorothy May Packham
Mildred Archer Peregoy
Fannette Perlman
Margaret Catherine Pfeiffer
Nellie Katherine Piersol
Carolyn Enos Potts
Alice Dudek Price
Ethel May Rathell
Myra Helen Reinle
Mildred Reiser
Elizabeth Snowden Ridgely
Ruth Del Ritter
Helen Marie Rogers
Pauline Rosenberg
Selma Rosenblatt
Naomi Louise Rudolphi
Laura Belle Sanner
Grace Schaffer
Hazel Schauman
Blanche Schlichter
Ida Victoria Seipp
Ruth Hazel Senft
Esther Knorr Shannon
Marion Marie Sharretts
Elizabeth MacGregor Shaw
Katharine Cecilia Shea
Myrtle Caralyn Sheeler
Katherine Marie Siegwart
Erma Hazel Smith
Ethel Alberta Smith
Ida Beatrice Smith
Mildred Van Ingen Smithe
Helen Elizabeth Smyth
Hetty Lovejoy Sorden
Ray Marian Stern
Eva Helena Sullivan
Lola Ashton Tebbs
Ida Ruth Templeman
Alma Marguerite Thomas
Edith Gwenola Thomas

Edith Thompson
Sarah Augusta Tilghman
Katherine Treide
Mary Tretick
Elizabeth Van Sant
Olive Donvella Vogt
Lucretia Berry Walker
Helen Grace Walter
Catharine Howard Worthington Warner
Florence Troville Warwick
Margaret Anderson Waters
Helen Worthington Watkins
Katherine Adelaide Watkins
Kathryn Watson
Jessie Marie Webb
Rebekah Jane Whalen
Hannah Greenwood Wheatley
Beulah Marie Wheeler
Lillian Griscom White
Helen Catherine Wilcoxon
Ruth Wilfson
Charlotte Williams
Ruth Bryan Williams
Dorothy Willis
Abbie Anne Wilson
Ida Pertsch Wirth
Rena Wolman
Margaret Wright
Alice Martin Yonson

RECIPIENTS OF PEABODY MEDALS.

FIRST GRADE.

Dorothy Getz
Sarah Augusta Tilghman
Marcia Lewis Leach
Meta Helena Miller
Kathryn Laura Behrens

SECOND GRADE.

Mildred Belt
Hetty Lovejoy Sorden
Elizabeth Beyer
Alice Martin Yonson
Edna May
Ruth Elizabeth Buckley
Charlotte Williams
Birdie May Jackson
Irene Isabelle McLaughlin
Myrtle Caralyn Sheeler

HONORABLE MENTION.

Ruth Hazel Senft
Helen Marie Rogers
Katharine Cecilia Shea
Myra Helen Reinle
Blanche Schlichter
Emily Helber
Grace Schaffer
Jessie Marie Webb
Minnie May Marsden
Ginevra Dorothy Munding

NOTE—Miss Ethel Lipschutz takes rank in scholarship second, but under the rules she is not eligible to a Peabody prize because not all of the work offered by her for graduation was done in the Baltimore public schools. Miss Helen Worthington Watkins takes rank in scholarship ninth, but under the rules she is not eligible to a Peabody prize because the work offered by her for graduation was completed in more than four years.

RECIPIENTS OF SCHOLARSHIPS.

Goucher College Scholarship	Sarah Augusta Tilghman
Alumnæ Scholarship	Helen Worthington Watkins
Class of 1913 Scholarship	Hetty Lovejoy Sorden
Eaton & Burnett's Business College	Linda Lawrence Hitchcock Selma Beck

PAPERS RELATING
TO THE
COLORED TRAINING SCHOOL FOR THE SCHOLASTIC YEAR 1912-1913.

FACULTY, 1912-1913

JOSEPH H. LOCKERMAN, *Principal,*
Mathematics, School Management, Participation.

Theory Department

ANNA O'H. WILLIAMSON, *Assistant,*
History, Geography, Nature Study.

GEORGINE S. LEWIS, *Assistant,*
Reading, Literature, Language and Grammar, Penmanship.

NELLIE B. NICHOLSON, *Assistant,*
Child Study, Psychology, Principles of Teaching, History of Education.

Supervisors of Practice Teaching

LUCINDA COOK,
Supervisor of Practice Teaching.

MARY E. COOPER,
Assistant Supervisor of Practice Teaching.

ENROLLMENT FOR THE SCHOLASTIC YEAR, 1912-1913.

Number admitted as new pupils since September 1, 1912:		
Boys	7	
Girls	52	
		59
Number withdrawn, not re-entered		11
Number advanced to Class II substitute list		38
Number on roll, June 30, 1913:		
First year	24	
Second year	24	
		48
Average enrollment during the year		49
Average number belonging during the year		41
Percentage of attendance during the year		94

REPORT OF THE PRINCIPAL OF THE COLORED HIGH SCHOOL.

Baltimore, June 30, 1913.

Mr. Francis A. Soper,
Superintendent of Public Instruction.

Dear Sir: I beg leave to report that the work for the scholastic year 1912-1913 was concluded with the graduation of seventy-seven pupils (fourteen boys and fifty-two girls from the four-year high school course, and one boy and ten girls from the two-year vocational course) at the Commencement, at the Lyric, Friday evening, June 20, 1913.

In view of the special report submitted to you under date of March 27, 1913, which set forth in detail the state of affairs in this school, it will only be necessary for me to submit the final statistics of the year's work. I desire to say, however, that the work of the teachers has for the most part been very satisfactory. The pupils have shown a splendid spirit both in conduct and in scholarship. We have had the usual number of lectures by members of the faculty, and by outsiders for the entire school, and our quarterly Parents Meetings and monthly Educational Faculty Meetings have been unusually interesting and profitable.

In the course of the year we have had to add one new teacher in the Department of English and History, Miss Orra D. Weaver having been appointed as a substitute in February. The increase in enrollment for September will make necessary the appointment of an additional teacher in Girls' Manual Training, who will be able to teach sewing and designing. The instruction in vocal music has long demanded the acquisition of a resident teacher of music for this school. This need can be satisfied by the appointment of a music teacher who shall also be able to teach some of the commercial branches.

To provide for the increased accommodations, certain changes have been proposed for the shop buildings, which are to be made in the course of the summer, and the Daly Building which has been leased, will be put in condition during the summer for occupancy next September. The Needle Building will not be required further for school purposes.

In conclusion, I desire to express the hope that some provision will be made for increasing the salaries of the teachers in this school, and for the adoption of a regular salary scale.

Finally, I wish to thank the Superintendent and the Board of School Commissioners for the uniform interest and consideration of the needs of this school.

Respectfully submitted,

MASON A. HAWKINS,
Principal.

PAPERS RELATING
TO THE
COLORED HIGH SCHOOL.

FACULTY, 1912-1913.

MASON A. HAWKINS, A. B., A. M., *Principal.*

ANNIE E. SMITH, *Clerk.*

DWIGHT O. W. HOLMES, A. B., *Vice-Principal,*
and
Head of Department of Sciences.

DANIEL A. BROOKS,
Head of Department of Boys' Manual Training.

CARRINGTON L. DAVIS, A. B.,
Head of the Department of Foreign Languages.

BEULAH S. WILDER,
Acting Head of the Department of Domestic Art and Science.

Assistants

FANNIE L. BARBOUR,
Mathematics.

MAUDELLE T. BROWN, A. B.,
Mathematics.

LOUISE R. M. PARM,
English.

JOSHUA E. MAXWELL, A. B.,
History and Commercial Subjects.

LUCY D. SLOWE, A. B.,
English.

ETHEL G. JONES, A. B.,
English and History.

MARGARET A. FLAGG, A. B.,
English and History.

GOUGH D. McDANIELS, Ph. B.,
English and History.

RALPH W. RECKLING, Ph. B.,
English and History.

ORRA D. WEAVER,
English.

CAROLYN B. KING, A. B.,
Latin.

ERMA B. BRUCE, A. B.,
German.

S. LILLIAN HUGHES, A. B.,
German and Latin.

PERRY D. G. PENNINGTON, Ph. B.,
Biology, Physiology, Physical Geography.

J. ARTHUR TURNER, A. B.,
Biology, Botany, Zoology.

ARTHUR E. WHEELER,
Physical Training.

RALPH V. COOK, M. E.,
Mechanical Drawing, Woodturning, Freehand Drawing.

GEORGIANA H. FIELDS,
Domestic Science.

ETHELYN G. HENRY,
Domestic Art.

ETHEL A. LEWIS,
Stenography and Typewriting.

JOHN J. WHEELER, B. S., M. E.,
Forging, Machine Practice, Physics.

ZELMYRA PETERSON, A. B.,
Domestic Art and Science.

LEVI V. MOORE,
Benchwork.

JAMES A. B. CALLIS,
Printing.

JOHN H. MURPHY, Jr.,
Printing.

Table Showing Enrollment, Etc., for the Year 1912-13.

	Boys.	Girls.	Total.
Number of new pupils admitted during year	180	425	605
Number of pupils admitted by promotion (February, 1913)	33	80	113
Total number of pupils during year	213	505	718
Number of pupils who left and re-entered during the year	74	149	233
Number of pupils withdrawn during the year	31	95	126
Number of pupils promoted to Training School	...	7	7
Number of pupils graduated during the year:			
Academic	14	52	66
Special two-year	1	10	11
Number of pupils in school, June 30, 1913:			
Belonging	160	382	542
In care	182	410	592
Average attendance of pupils during the year			546.6
Average number of pupils belonging during year			579.7
Percentage of attendance during year, based on average number belonging			95.7

Table showing number belonging, average attendance and percentage of attendance for each month during the year.

Months, 1912-13.	Number Pupils Belonging (Average).	Present (Average) Number Pupils.	Percentage of Attendance.
September	561.2	539.4	96.1
October	568.5	552.4	97.1
November	566	545	96
December	553	530	96
January	535	509	96
February	617	592	96
March	606	577	95
April	589	561	95
May	569	538	95
June	548	522	95
Average	579.7	546.6	95.7

Table showing the subjects taught in the Colored High School, number of classes in each subject and the number of pupils pursuing each subject.

SUBJECTS.	First Year.		Second Year.		Third Year.		Fourth Year.	
	Number of Classes.	Number of Pupils.	Number of Classes.	Number of Pupils.	Number of Classes.	Number of Pupils.	Number of Classes.	Number of Pupils.
Algebra	8	257	.....	.....	.....	.....	.....	.....
Biology	.....	.....	4	131	.....	.....	2	32
Bookkeeping	*	13	2	36	.....	.....	.....	.....
Commercial Arithmetic	3	59	.....	.....	.....	.....	.....	.....
Domestic Art	11	257	6	131	4	85	.....	.....
Domestic Science	10	250	6	131	4	85	.....	.....
English	10	311	3	134	5	118	3	69
Freehand Drawing	10	271	5	96	.....	.....	.....	.....
Forging	.....	.....	.....	.....	.....	.....	.....	.....
Geometry	.....	.....	4	119	.....	.....	.....	.....
German	3	87	2	45	4	69	2	27
History	7	224	.....	.....	4	98	3	57
Latin	5	183	2	82	*	10	*	10
Machine Practice	.....	.....	.....	.....	3	50	2	24
Mechanical Drawing	4	74	2	25	.....	.....	.....	.....
Physical Geography	1	26	.....	.....	.....	.....	.....	.....
Physics	.....	.....	.....	.....	2	38	1	10
Physiology	2	54	.....	.....	.....	.....	.....	.....
Physical Training	10	220	3	48	4	96	4	69
Printing	.....	.....	.....	.....	3	30	1	20
Stenography	.....	.....	*	5	*	5	*	6
Typewriting	.....	.....	.....	.....	3	50	2	34
Woodturning	.....	.....	*	6	*	4	*	5

*Not taught in classes.

GRADUATES, 1913.

ACADEMIC COURSE.

Louise Ethel Anderson
Mary Elizabeth Anderson
Julian John Archer
Katie Sarah Archer
Pauline Adelaide Barnes
John Lloyd Berry
Edith Juanita Biddle
Hilda Agnes Biddle
Evelyn Virginia Blackston
Lula May Briggs
Marie Juliette Brown
Edna May Bunday
Susie Belle Bunday
Laura Avonia Burgess
Talita Marion Burnside
May Victoria Burt
Ora Ellen Campbell
John Emory Toussaint Camper
Cornelius R. Dawson
Esther Ellen Fowler
Ruth Marita Fowler
Florence Nightingale Gaines
Clyde Chambers Garnes
Cassie Eleanora Glascoe
Daniel Grafton Hill, Jr.
Bessie Blanche Jefferson
Mamie Marguerita Johns
Florence Louise Johnson
Josephine Matthews Johnson
Julia Diaz Lawson
Carrie Estella Lewis
Sarah Estella Lewis
Alma Augusta McQuinn
Teresa Trust Nickens
Louise Gertrude Nixon
Edith Elizabeth Norton
Sarah Janet Owens
Edna Augusta Parker
Frances Annette Pennington
Frank Howard Perkins
Loretta Tyler Mae Powers
Frances Olivia Proctor
Lawrence William Queen
Etta Ovella Rawlings
Essie May Robinson
Lloyd Aubrey Robinson
Charles Joseph Rusk
Esther Sarah Emma Russell
Sarah Isabelle Sampson
Frank Augustus Saunders
George Allen Scott
Etta Rosamond Rupplee Seger
Louise Lavinia Simms
Frances Helen Sommerville
Martha Lavinia Stewart
Bertha Ollie Taylor
Athlea Rebena Tomlin
Mabel Louise Turner
Daniel Elvin Watts
Bertha Louise Webb
Pearl Ethel Wicks
John Roles Williams
Grace Parker Wilson
Blanche Gertrude Woodland
Gertrude Rebecca Wright
Ruby Isabelle Young

TWO-YEAR SPECIAL COURSE.

Cora Cordelia Chesley
Julia Coltimay Croxson
Rheda Waldron Francis
Nannie Gross
Hallie Quinn Brown Hamer
Cordelia Chappelle Mason
Gertrude Amanda Parker
Irene Thomas
Lena Walker
Elise Beatrice Constantia Williams
Eugene Wilson

RECIPIENT OF ALUMNI MEDAL.

John Lloyd Berry

VALEDICTORIAN.

Pearl Ethel Wicks.

SALUTATORIAN.

Charles Joseph Rusk

REPORT OF THE SUPERVISOR OF SCHOOL BUILDINGS.

BALTIMORE, June 30, 1913.

To the Board of School Commissioners.

GENTLEMEN: I have the honor to submit the following report for the scholastic year 1912-1913.

NEW BUILDINGS COMPLETED IN 1912-1913.

School No. 70, William Street and Warren Avenue—Lot, 190 feet by 140 feet; building, 82 feet by 161 feet. This is a first-class three-story and basement building, modern in all of its appointments. It contains twenty-four classrooms of the standard (26 feet by 32 feet) size, each with coatroom, book and teachers' closets; also principal's office and teachers' rooms. The basement contains an assembly hall, large manual training and cooking rooms, boys' and girls' toilets (the teachers' toilets are on the upper floors), heating and ventilating plants, and fuel bins. The building is heated by steam and ventilated by blower fan. A vacuum cleaning system has been installed. Electric gongs operated from the principal's room have been installed for fire drills, recess calls, school assembly and dismissal. Drinking fountains have been provided at convenient points on each floor. There is one fireproof staircase at each end of the building and one in the center. The building is equipped with fire hose at each end of the corridors and basement. The building was dedicated on October 24, 1912, with appropriate exercises. Cost of building, $123,950.

School No. 13, Patterson Park Avenue and McElderry Street—The new addition is 39 feet, 6 inches by 72 feet, 6 inches, with two stories and basement. It contains four classrooms of the standard size, 26 feet by 32 feet, each with coatrooms, bookcases and teachers' coat closets. The basement contains an assembly hall, boys', girls' and teachers' toilets. Two new steam boilers have been installed to heat both the new addition and the old building. Drinking fountains have been installed at convenient points in the new and the old buildings. Two new fireproof staircases have been provided in the new addition. The building is equipped with fire hose at each end of corridors and basement. The building was completed and occupied the first of October, 1912. Cost of the addition, $21,944.65.

BUILDINGS NOW UNDER CONSTRUCTION.

School No. 27, Corner Fayette and Chester Streets—Lot, 115 feet by 182 feet, 9 inches; building, 81 feet, 4 inches by 159 feet, 5 inches; a first-class three-story and basement building, modern in all its appointments. It contains twenty-four classrooms of the standard size (26 feet by 32 feet), each with coatroom, bookcases and teachers' closets, also principal's office and a room for teachers. The basement contains an assembly hall, manual training and cooking room, boys' and girls' toilets, also janitor's, boiler and engine rooms. The building is heated by steam and ventilated by blower fans. There is one fireproof staircase at each end of the building, and one in the center. Drinking fountains have been provided at convenient points on each floor. Electric gongs operated from the principal's room have been installed for fire drills, recess calls, school assembly and dismissal. The building is equipped with fire hose at each end of corridors and basement. The building will be completed by September, 1913. Cost of building, $106,196.

School No. 99, North Avenue and Washington Street—The new addition, 94 feet, 0 inches by 52 feet, 6 inches, has three stories and basement. It contains ten classrooms of the standard size (26 feet by 32 feet), each with coatrooms, bookcases and teachers' closets. The assembly hall is on the first floor. The basement contains the boys' and girls' toilets, heating and ventilating plants. The building is heated by steam and ventilated by blower fans. Electric gongs operated from the principal's room have been installed for fire drills, recess calls, school assembly and dismissal. Drinking fountains have been provided at convenient points in the new addition, and in the old part of the building. The building is equipped with fire hose at each end of corridors and basement. The building will be completed by September, 1913. Cost of the addition, $53,852.

School No. 6, South Ann Street—Lot, 144 feet by 183 feet; building, 83 feet, 11 inches by 178 feet, 5 inches. This is a first-class two-story and basement building, modern in all its appointments. It contains sixteen classrooms of the standard size (26 feet by 32 feet), each with coatroom, bookcases and teachers' closets; principal's offices, teachers' and rest room on the first floor, and an open-air class-room on the roof with rest room, kitchen, bath and toilet rooms. Toilets are provided at each end of the second-story corridor for the teachers, boys and girls. The basement contains an assembly hall, boys' and girls' gymnasiums and shower-baths, toilets, the heating plant and fuelroom. The building is heated by steam and ventilated by blower fans, and is equipped with a vacuum cleaning system. Electric gongs operated from the principal's room for fire drills, recess calls, school assembly and dismissal have been installed. Drinking fountains have been provided at convenient points on each floor and in the basement. The building has four fireproof staircases, with the classrooms opening directly on them. The building is equipped with fire hose at each end of corridors and in the basement. The building will be completed by September, 1913. Cost of building, $117,475.

School No. 22, Hamburg and Scott Streets—Lot, 163 feet by 200 feet; building, 83 feet, 6 inches by 179 feet, 2 inches.

This is a first-class three-story and basement building, modern in all its appointments. It contains twenty-four classrooms of the standard size (26 feet by 32 feet), each with coatrooms, bookcases, teachers' closets, principal's office and teachers' rooms. The basement contains an assembly hall, manual training and cooking room, boys' and girls' toilets (toilets are also provided on the second and third stories for the teachers, boys and girls), boys' and girls' shower-baths, heating and ventilating plants, janitor's and fuelroom. The building is heated by steam and ventilated by blower fans, and is equipped with a vacuum cleaning system. Electric gongs operated from the principal's room for fire drills, recess calls, school assembly and dismissal have been installed. Drinking fountains have been installed at convenient points on each floor and in the basement. The building has four fireproof staircases from the pavements up to the third story, and one on the inside from the first to the third floors. The building has eight entrances. On the roof there are two open-air classrooms with kitchen, bath and toilet rooms. The building is equipped with fire hose at each end of corridors and basement. The building will be completed by November, 1913. Cost of building, $152,874.

The new Polytechnic Institute on North avenue will be completed by October, 1913. There are accommodations for 1,300 pupils: thirty-five classrooms; four laboratories—mechanical, electrical and physical; eight drawing rooms; eight shops—machine, pattern, forge, carpentry and sheet metal; a library, and an assembly hall with a seating capacity of 400.

The building is equipped with approved systems of plumbing, heating, ventilating, electric lighting, fire alarm, telephone, call-bell, progral clock, vacuum cleaning and sprinkling.

The laboratory equipments provided for are as follows:

Mechanical Laboratory—A 100 kw turbo-generator set; a 100 kw four-valve tandem compound engine; a 100 kw cross-compound engine; a 100 H. P. inverted triple-expansion marine engine; a 60 H. P. inverted compound marine engine; a 46 H. P. high-speed engine with shaft governor, shifting eccentric, and piston valve; a 25 H. P. plain D-slide valve engine; a 30 H. P. Autocar gasoline engine; a gas engine and producer; an air compressor; a water motor; a motor-driven torsinal testing machine; a motor-driven oil testing machine; a motor-driven Riehle testing machine—tension and compression—of 50,000 pounds capacity; surface condenser; independent air pump; and a boiler capacity, aggregating 5,000 square feet of heating surface.

Electrical Laboratory—Tables with electrical connections to supply current of any nature or voltage; switchboard and panel-board to connect tables to storage batteries or to any other source available; a 2-kw rotary converter for facilitating changes in nature of current supplied when necessary; a 2-H. P. motor for direct current; a 2-H. P. three-phase induction motor; necessary transformers and starting devices; a flame arc lamp; a mercury arc rectifier; a DeForrest wireless telegraph set; storage battery to operate signal bells, fire alarm and telephone systems, and to furnish current for experiments.

Chemical Laboratory—Tables connected to gas and water and with suction exhaust for removing poisonous gases (classrooms similarly equipped) and special balance-room.

Physical Laboratory—Tables similar to those of the electrical laboratory, but connected with gas and water supply; and physical apparatus necessary for the standard classroom demonstration and laboratory work.

The equipment for the machine, pattern, forge, carpentry and sheet metal shops, and for the drawing rooms are of the most modern and advanced character.

Portable Buildings.

Two portables were removed from School No. 99 and placed in the girls' yard of School No. 68.

One portable was removed from the Parental School and placed in the yard of School No. 65.

Four portables were removed from School No. 83 to School No. 47; two were placed in the boys' yard and two in the girls' yard for the use of School No. 24.

REPAIR SHOP.

A large number of old double desks were altered into single desks and placed in sixty-eight school buildings, and a large number in the buildings were scraped and varnished; and a large number of running feet of slate blackboards and burlap were placed in the classrooms. There were many teachers' desks, wardrobes, bookcases and chairs repaired and varnished, also shelving and hat and coat hooks were put in. The new furniture, blackboards and burlap were placed in school building No. 70. In addition to School No. 63, and the addition to School No. 64, three portable buildings were moved. Two were placed in the yard of School No. 77, and one in the yard of School No. 83. The new furniture, blackboards and burlap, platforms and shelving were placed in the new Polytechnic Institute, corner North avenue and Calvert street, and new schools Nos. 22, 27, 6 and the ten-room addition to No. 99. Four portable buildings were moved from School No. 83 and placed in the yards of No. 47; two moved from No. 99 and placed in the yard of No. 68; one moved from the Parental School and placed in the yard of No. 65.

School No. 83, Lakewood and Philadelphia Avenues—The building is 71 feet by 142 feet, 10 inches, a first-class three-story and basement building, modern in all its appointments. It contains eighteen classrooms of the standard size (26 feet by 32 feet), each with coatroom, bookcases and teachers' closets; also the principal's office and a room for teachers. The basement contains an assembly hall, boys' and girls' toilets and shower-baths, two unassigned rooms, heating and ventilating plant. The building is heated by steam, and ventilated by blower fan, and is also equipped with a vacuum cleaning system, electric gongs from the principal's room for fire drills, recess calls, school assembly and dismissal. Drinking fountains have been provided at convenient points on each floor and in the basement. The building has three fireproof staircases, and will be completed by March 1, 1914. Cost of building, $103,977.

Respectfully submitted,

HENRY R. DAVIS,
Supervisor of School Buildings.

TOTAL NUMBER OF EMPLOYEES UNDER THE SUPERVISOR OF BUILDINGS, JUNE 30, 1913.

Engineers	21
Firemen	71
Janitors	26
Janitresses	217
Watchmen	1
Total	336

QUANTITY OF FUEL CONSUMED FROM JUNE 15, 1912, TO JUNE 15, 1913.

No. 1 Hard Coal, tons	541
No. 2 Hard Coal, tons	3,835
No. 3 Hard Coal, tons	2,459
Total of Hard Coal, tons	6,835
Sunbury Coal, tons	37
Bituminous Coal, tons	3,113
Wood, cords	295

STATISTICAL REPORT

FOR THE SCHOLASTIC YEAR, 1912-13, WITH STATISTICS FOR THE SUMMER SESSION OF THE VACATION SCHOOLS, 1913, AND PERMANENT WITHDRAWALS DURING VACATION ADDED

Statistical Report for the Scholastic Year 1912-13, with Statistics for the Summer Session of the Vacation Schools, 1913, and Permanent Withdrawals During Vacation Added.

By EDWIN HEBDEN, Statistician.

For the purpose of studying our problems, the statistics for the different grades of schools as well as those for white and for colored schools are presented in separate tables. Wherever it has been deemed desirable to combine statistics of different kinds of schools, this has been done.

Table 1 gives a general survey of all day schools. It will be seen that during the scholastic year there were enrolled in these schools a total of 73,820 pupils. There remained on the roll at the close of the year 66,506 pupils, the difference, 7,314, being the number that withdrew from this system during the scholastic year. The total average number belonging during the year is 63,750, the total average attendance, 57,263; thus showing the rate of attendance to be the rather high figure of 90%.

TABLE 1.

GENERAL SURVEY of all day schools, showing: Number of buildings and numbers of superintendents, supervisors, teachers, and pupils by race, sex, and grade of schools; also grand totals.

WHITE SCHOOLS.

GRADE OF SCHOOL.	Number of schools, June 30, 1913.	Number of teachers, including principals and substitutes in charge of classes.			Number of pupils belonging, June 30, 1913.	Average number belonging for scholastic year.	Average attendance for the year.	Per cent of attendance.	Total enrollment of pupils for the scholastic year, 1912-1913.			Net roll, June 30, 1913 (includes number belonging and temporarily dropped absentees).
		Men.	Women.	Totals.					Boys.	Girls.	Totals.	
Normal school—												
Teachers' Training School.....	1	* 1	5	6	122	130	124	95	4	152	156	122
Secondary schools—												
Baltimore City College.........	1	*35	......	35	744	832	761	92	991	....	991	799
Baltimore Polytechnic Institute.	1	*49	......	49	969	1,008	936	93	1,184	....	1,184	1,036
Eastern High School...........	1	* 2	34	36	792	817	761	93	....	953	953	830
Western High School..........	1	* 1	46	47	1,110	1,192	1,129	94	....	1,436	1,436	1,235
Totals....................	4	87	80	167	3,615	3,849	3,587	93	2,175	2,389	4,564	3,870
Elementary schools—												
Grades one to eight...........	88	*49	1,240	1,289	48,894	49,385	44,663	91	28,230	27,507	55,737	50,975
Kindergartens	.....	......	40	40	800	766	642	86	591	618	1,209	955
Ungraded classes..............	.....	......	26	26	363	309	264	85	488	68	556	401
Parental school...............	1	* 1	2	3	31	32	32	100	44	....	44	31
Totals....................	89	50	1,308	1,358	50,088	50,492	45,601	90	29,353	28,193	57,546	52,362
All white schools—												
Totals....................	94	138	1,393	1,531	53,825	54,471	49,312	91	31,532	30,734	62,266	56,354

COLORED SCHOOLS.

Normal school—												
Colored Training School	1	* 1	3	4	36	41	39	95	7	52	59	48
Secondary school—												
Colored High School	1	*15	15	30	542	571	548	96	213	505	718	592
Elementary schools—												
Grades one to eight	15	41	175	216	8,394	8,523	7,247	85	4,717	5,790	10,507	9,377
Kindergartens	....	......	7	7	97	131	107	82	106	119	225	123
Ungraded classes	....	......	1	1	12	13	10	77	35	10	45	12
Totals	15	41	183	224	8,503	8,667	7,364	85	4,858	5,919	10,777	9,512
All colored schools—												
Totals	17	57	201	258	9,081	9,279	7,951	86	5,078	6,476	11,554	10,152

SUMMARY FOR ALL DAY SCHOOLS.

Normal schools	2	2	8	10	158	171	163	95	11	204	215	170
Secondary schools	5	102	95	197	4,157	4,420	4,135	94	2,388	2,894	5,282	4,462
Elementary schools	104	91	1,491	1,582	58,591	59,159	52,965	90	34,211	34,112	68,323	61,874
Superintendents, supervisors and special teachers—												
Superintendent	....	1	......	1	......	......	......	....	......	......	......	......
Assistant superintendents	....	6	......	6	......	......	......	....	......	......	......	......
Supervisors—												
Principals of schools	....	*(31)	*(28)	......	......	......	......	....	......	......	......	......
Practice	....	......	5	5	......	......	......	....	......	......	......	......
Music	....	......	1	1	......	......	......	....	......	......	......	......
Drawing	....	......	1	1	......	......	......	....	......	......	......	......
Sewing	....	......	1	1	......	......	......	....	......	......	......	......
Physical training	....	1	......	1	......	......	......	....	......	......	......	......
Manual training	....	*(1)	......	......	......	......	......	....	......	......	......	......
Special teachers—												
Music	....	......	3	3	......	......	......	....	......	......	......	......
Drawing	....	......	8	8	......	......	......	....	......	......	......	......
Sewing	....	......	31	31	......	......	......	....	......	......	......	......
Physical training	....	......	2	2	......	......	......	....	......	......	......	......
Manual training	....	12	4	16	......	......	......	....	......	......	......	......
Cookery	....	......	25	25	......	......	......	....	......	......	......	......
Grand totals	111	215	1,675	1,890	62,906	63,750	57,263	90	36,610	37,210	73,820	66,506

*Principals giving more than half their time to supervision and administration counted in the faculties of their respective schools; supervisor of manual training counted in the faculty of Polytechnic Institute.

Table 2 presents a comparison of the numbers and the several kinds of schools during the scholastic year just closed with the previous year, 1911-12. It is interesting to note the general increase in all schools except the higher colored schools. The net increase for all day schools over the previous year is seen to be 3,152 pupils, of whom 2,911 are found in the elementary schools, 265 in the secondary schools. The loss of 25 students in the Colored Training School with an increase of but one in the white Teachers' Training School is a matter which is brought particularly to the attention of the administration, these schools being the main source of supply for the teachers in the schools.

TABLE 2.

Grades of Schools Compared.

Net roll of June 30, 1913, compared with net roll of June 30, 1912, showing increase and decrease.

White Schools.

Grade of School.	Year 1912-13.	Year 1911-12.	+Increase. —Decrease.
Normal school —			
Teachers' Training School...	122	121	+ 1
Secondary schools—			
Baltimore City College (boys).	799	791	+ 8
Polytechnic Institute (boys)...	1,006	881	+ 125
Eastern High School (girls).	830	812	+ 18
Western High School (girls).	1,235	1,116	+ 119
Totals..................	3,870	3,600	+ 270
Elementary schools—			
Grades one to eight, inclusive.	50,975	48,551	+2,424
Kindergartens	955	859	+ 96
Ungraded classes............	401	246	+ 155
Parental school.............	(*31)	(*42)	(*—11)
Totals..................	52,331	49,656	+2,675
All white schools—			
Totals..................	56,323	53,377	—2,946

* Included in totals for grades.

COLORED SCHOOLS.

GRADE OF SCHOOL.	Year 1912-13.	Year 1911-12.	+Increase. —Decrease.
Normal school—			
Colored Training School.....	48	73	— 25
Secondary school—			
Colored High School........	592	597	— 5
Elementary schools—			
Grades one to eight, inclusive.	9,377	9,054	+ 323
Kindergartens	123	175	— 52
Ungraded classes............	12	47	— 35
Totals..................	9,512	9,276	+ 236
All colored schools—			
Totals..................	10,152	9,946	+ 206

SUMMARY FOR ALL SCHOOLS.

Normal schools	170	194	— 24
Secondary schools.............	4,462	4,197	+ 265
Elementary schools	61,843	58,932	+2,911
Grand totals.............	66,475	63,323	+3,152

Table 3 still further separates the figures for comparison with the previous scholastic year. It is of much importance to note not only whether the several grades show an increase or decrease in enrollment over the previous year, but more particularly whether the pupils are progressing and advancing so that the upper grades show an increase corresponding to the increase in the lower grades. If the contrary is the case, it can only result from the holding back of pupils in the lower grades. Table 3, therefore, is prepared to enable the Board of Superintendents to see the development of their problem as a whole and thus enable them to determine upon the proper policy to be pursued.

TABLE 3.

COMPARISON BY GRADES.

Net roll by grades of June 30, 1913, compared with net roll by grades of June 30, 1912, showing increase and decrease.

GRADES.	White schools.			Colored schools.			All schools.		
	Year 1912-13.	Year 1911-12.	+Increase. —Decrease.	Year 1912-13.	Year 1911-12.	+Increase. —Decrease.	Year 1912-13.	Year 1911-12.	+Increase. —Decrease.
Normal schools—									
Second year	53	59	— 6	24	50	— 26	77	109	— 32
First year	69	62	+ 7	24	23	+ 1	93	85	+ 8
Secondary schools—									
(*Number graduated)	(632)	(502)	(+ 130)	(77)	(79)	(— 2)	(709)	(581)	(+ 128)
Fourth year	†612	†587	+ 25	62	72	— 10	†674	†659	+ 15
Third year	662	697	— 35	91	91	....	753	788	— 35
Second year	982	964	+ 18	146	147	— 1	1,128	1,111	+ 17
First year	1,614	1,352	+ 262	293	287	+ 6	1,907	1,639	+ 268
Elementary schools—									
Eighth grade	2,285	2,327	— 42	319	306	+ 13	2,604	2,633	— 29
Seventh grade	3,187	3,203	— 16	375	366	+ 9	3,562	3,569	— 7
Sixth grade	4,727	4,315	+ 412	576	597	— 21	5,303	4,912	+ 391
Fifth grade	6,385	5,641	+ 744	874	878	— 4	7,259	6,519	+ 740
Fourth grade	7,763	7,224	+ 539	1,147	1,136	+ 11	8,910	8,360	+ 550
Third grade	8,502	8,045	+ 457	1,651	1,527	+ 124	10,153	9,572	+ 581
Second grade	8,717	8,350	+ 367	1,932	1,892	+ 40	10,649	10,242	+ 407
First grade	9,409	9,446	— 37	2,503	2,352	+ 151	11,912	11,798	+ 114
Kindergartens	955	859	+ 96	123	175	— 52	1,078	1,034	+ 44
Ungraded classes	401	246	+ 155	12	47	35	413	293	+ 120
Totals	56,323	53,377	+2,946	10,152	9,946	+ 206	66,475	63,323	+3,152

*Included in net roll.

†Includes four and six post graduates, respectively.

Tables 4 and 5 continue similar tables presented in last year's report. The trend of movements in any school system cannot be determined upon the basis of any one year's results. It was for that reason that two different series of years (one for the entire system, elementary and secondary together; the other for the elementary schools alone), the last year of each series being the scholastic year under report, are selected to show the average rate of movement and the direction in which it trends. A study of these two tables and the comparison with similar figures in last year's report show that, for the ten years closing June, 1913, there has been a small increase over the ten years ending June, 1912, in the per cent of children advancing into each succeeding grade in both elementary and secondary schools. The same is true, but in a less marked degree, in the elementary schools alone for the last five years. A most significant fact is seen by comparing the rates per cent advancing into the several grades in the elementary schools for the period 1892 to 1901, as shown in the first part of table 4, with the per cent of pupils advancing into the successive elementary grades, as shown in table 5, for the five years ending June, 1913.

The statistics in all school systems should be studied as a whole and in their relation to each other. When the table showing the number and rate per cent of pupils over age or over time or repeating, happens to be noticed by itself, there comes a feeling that something is failing to meet requirements adequately. It is only when a comparison, such as I have noted above, is made that the real conditions and the development of the system can be properly apprehended. All school systems in this country have these problems of over age, over time, repetition, and adaptability of the course of study definitely forced upon them. It must not be supposed that conditions are worse now than they were fifteen, twenty years ago, or longer, as is often stated. As a matter of fact they are much better; but educators are studying their problems very much more closely, are truthfully presenting them to boards of education and the public, and are courageously facing their difficulties. That conditions are improving is shown very definitely by noting the rate per cent of pupils advancing through the elementary grades in the two tables above. For the series covering the earlier ten years, 63.8% of pupils advanced on the average from the first grade to the second grade. In the latter table, covering the series of five years ending June, 1913, 79.2% is the corresponding rate, an increase of 15.4% for the later period. In the average number advancing into the third grade, 17.3% increase is noted; into the fourth grade, 12%; into the fifth grade, 9.8%; into the sixth grade, 7.6%; into the seventh grade, 6.6%, and into the eighth grade, 5.4% increase over the previous period. No more convincing figures could be produced to show the general trend of school development.

TABLE 4.

Showing the number (net roll) of pupils entering the elementary schools, the number advancing into each succeeding grade, and the number graduated from the secondary schools during the last ten years.

Year Entered.	Grades in elementary schools.								Years in secondary schools.					Year Graduated.
	First Grade.	Second Grade.	Third Grade.	Fourth Grade.	Fifth Grade.	Sixth Grade.	Seventh Grade.	Eighth Grade.	First Year.	Second Year.	Third Year.	Fourth Year.	Graduated. (c)	
1892	18,028	10,317	8,205	7,427	5,774	4,243	2,673	1,693	849	516	367	321	372	1904
1893	18,121	11,093	8,992	8,148	6,200	4,401	2,703	1,646	948	641	471	403	368	1905
1894	18,464	11,127	9,043	8,272	6,274	4,392	2,679	1,710	1,029	699	513	463	424	1906
1895	18,134	11,344	9,434	8,516	6,132	4,405	2,884	2,023	1,189	787	555	446	417	1907
1896	18,327	11,592	9,545	8,568	6,211	4,495	2,863	2,011	1,324	893	613	486	481	1908
1897	18,373	11,361	9,391	8,269	6,231	4,274	3,005	1,992	1,279	889	644	494	493	1909
1898	18,622	11,360	9,658	8,535	6,447	4,487	3,082	1,987	1,354	940	662	541	538	1910
1899	19,059	11,553	10,240	8,585	6,494	4,611	3,291	2,171	1,432	971	712	591	570	1911
1900	18,277	12,842	10,305	8,885	6,668	4,543	3,120	2,220	1,707	1,124	722	612	581	1912
1901	14,778	12,354	10,259	8,701	6,718	4,963	3,455	2,379	1,837	1,272	758	653	709	1913
Totals....	180,183	114,943	95,072	83,906	63,149	44,814	29,755	19,832	12,948	8,732	6,017	5,010	4,953	.....
(a)	....	63.8	52.8	46.6	35.0	24.9	16.5	11.0	7.2	4.8	3.3	2.8	2.7	.....
									(b)...	67.4	46.5	38.7	38.3	.....

(a) Per cent of total number in first grade during the ten years advancing into each succeeding grade.

(b) Per cent of total number in first year secondary schools advancing into each succeeding year.

(c) The number of graduates includes those from three-year courses.

TABLE 5.

Showing the number (net roll) of pupils in the first grade, the number advancing into each succeeding grade, and the number in the eighth grade during the last five years.

YEAR IN FIRST GRADE.	Grades in elementary schools.								Year in Eighth Grade.
	First Grade.	Second Grade.	Third Grade.	Fourth Grade.	Fifth Grade.	Sixth Grade.	Seventh Grade.	Eighth Grade.	
1902	15,965	12,257	10,456	8,655	6,677	4,956	3,495	2,402	1909
1903	15,839	12,000	10,702	9,085	6,679	5,036	3,618	2,571	1910
1904	15,517	12,511	11,153	9,184	7,269	5,145	3,559	2,497	1911
1905	14,946	12,470	11,106	9,179	7,175	5,219	3,645	2,633	1912
1906	15,046	12,002	10,800	9,215	7,127	4,809	3,569	2,604	1913
Totals	77,313	61,240	54,217	45,318	34,927	25,162	17,886	12,707	......
(a)	....	79.2	70.1	58.6	45.2	32.5	23.1	16.4	......

(a) Per cent of the total number in first grade during the five years advancing into each succeeding grade.

Table 6 presents the general survey of the night schools for the winter term of 1912-1913, and table 7, a comparison of the numbers with the previous year. In these schools again there is a marked increase not only in the number enrolled but also in the rate per cent of attendance. The total enrollment was 8,788; the average number belonging, 4,310, with an average attendance of 3,188. An increase in the earnestness of the night school pupils is definitely shown by the increase in the number continuing through the year, 826 over the preceding year.

TABLE 6.

General Survey of all night schools for the year 1912-13, showing: Number of schools, teachers, and pupils by race, sex, and grade of schools; also grand totals.

White Night Schools.

Grade of Schools.	No. of schools.	Teachers.			Number belonging at end of year, March 21, 1913.			Average number belonging for the year 1912-13.			Average attendance for the year 1912-13.			Per cent of attendance for the year 1912-13.			Total enrollment for the year 1912-13.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Secondary schools—																			
Baltimore City College (commercial).	1	12	11	23	150	225	375	246	370	616	180	271	451	73	73	73	501	752	1,253
Baltimore City College (science cont.).	1	4	....	4	42	.....	42	52	.....	52	39	.....	39	75	.....	75	112	.....	112
Baltimore City College (Spanish)....	1	4	....	4	75	75	150	85	85	170	59	58	117	69	68	69	103	103	206
Evening High School (acad. and voc.).	1	12	....	12	148	15	163	229	16	245	153	13	166	67	81	68	565	34	599
Totals	4	32	11	43	415	315	730	612	471	1,083	431	342	773	70	73	71	1,281	889	2,170
Elementary schools—																			
Totals	8	36	26	62	797	540	1,337	1,028	698	1,726	824	572	1,396	80	82	81	2,582	1,596	4,178
Industrial arts—																			
Manual training....................	1	1	....	1	22	.....	22	19	.....	19	17	.....	17	90	.....	90	64	.....	64
Cookery	10	....	10	10	.....	456	456	.....	473	473	.....	383	383	.....	81	81	.....	648	648
Totals	11	1	10	11	22	456	478	19	473	492	17	383	400	90	81	81	64	648	712
Totals for all white schools...........	23	69	47	116	1,234	1,311	2,545	1,659	1,642	3,301	1,272	1,297	2,569	77	79	78	3,927	3,133	7,060

Colored Night Schools.

Grade of Schools.	No. of schools.	Teachers.			Number belonging at end of year, March 21, 1913.			Average number belonging for the year 1912-13.			Average attendance for the year 1912-13.			Per cent of attendance for the year 1912-13.			Total enrollment for the year 1912-13.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Secondary schools—																			
Colored Evening High School (acad).	1	7	3	10	148	314	462	166	359	525	94	203	297	57	57	57	300	558	858
Elementary schools—																			
Totals	4	14	1	15	202	197	399	235	249	484	156	166	322	65	67	67	400	470	870
Totals for all colored schools..........	5	21	4	25	350	511	861	401	608	1,009	250	369	619	62	61	61	700	1,028	1,728
Grand totals....................	28	90	51	141	1,584	1,822	3,406	2,060	2,250	4,310	1,522	1,666	3,188	74	74	74	4,627	4,161	8,788

TABLE 7.

Comparison of statistics of night schools for 1912-13, with corresponding data for 1911-12.

Items.	White night schools.			Colored night schools.			All night schools.		
	Year 1911-12.	Year 1912-13.	+Increase. —Decrease.	Year 1911-12.	Year 1912-13.	+Increase. —Decrease.	Year 1911-12.	Year 1912-13.	+Increase. —Decrease.
Number belonging, March 31.......	1,879	2,545	+666	701	861	+ 160	2,580	3,406	+826
Average number belonging for the year............................	2,983	3,301	+318	925	1,009	+ 84	3,908	4,310	+402
Average attendance for the year.....	2,177	2,569	+392	611	619	+ 8	2,788	3,188	+400
Per cent of attendance for the year..	73	78	+ 5	66	61	— 5	71	74	+ 3
Number of teachers................	103	116	+ 13	30	25	— 5	133	141	+ 8

TABLE 8.

Lectures in connection with night schools.

No.	Subject.	Lecturer.	Place.
1	Missions of Southern California	Charles J. Koch	Colored High School.
2	Egypt	William K. Naulty	School No. 63.
3	Missions of Southern California	Charles J. Koch	School No. 64.
4	Egypt	William K. Naulty	Baltimore City College.
5	Geography and Geology of Maryland	Prof. Arthur B. Bibbins	Colored High School.
6	Wireless	James B. Arthur	Baltimore City College.
7	City Police and the Police Power	Hugh E. Macbeth	Colored High School.
8	Battle of North Point	Charles J. Koch	School No. 53.
9	The Cross Roads of the World	Dr. J. O. Spencer	Colored High School.
10	Early Maryland	Mrs. Sioussatt	School No. 2.
11	Commencement Exercises	Address to graduates, *Dr. Channing Rudd	Baltimore City College.
12	Housing of the People	Dr. J. W. Magruder	Colored High School.
13	Missions of Southern California	Charles J. Koch	School No. 51.
14	Alaska	Dr. James	School No. 51.
15	Panama	Dr. O. W. Holmes	Colored High School.
16	Flowers	Philip Friese	School No. 51.

*Head of Department of Investments, Alexander Brown & Sons.

Table 9 is a general survey of the work done in the summer schools during the summer vacation of 1913. The figures here presented show a definite gain resulting from these schools. Seven hundred and seventy-one white pupils started the work of reviewing that in which they had failed during the regular sessions. Six hundred and twenty continued to the close of the summer term, and 511 of these, or 69%, succeeded in making up their deficiencies. This means a saving of at least 511 half-years of their school lives and probably the holding of many of them in the schools when they would otherwise have withdrawn discouraged. One hundred and ninety-three colored children started in the same kind of work. One hundred and forty-five of them continued to the close of the term, and 72, or 37%, succeeded in gaining promotion.

In the vocational school, 365 entered upon the work; 197 continued to the close of the term, and the figures showing satisfactory work in the various departments indicate a success in this line of work also.

TABLE 9.

REPORT OF SUMMER SCHOOLS—SESSION OF 1913.

SCHOOLS.	Total enrollment during term.			Net roll at end of term.			Average daily net roll.	Average daily attendance.	Per cent of attendance.	Number of teachers.		Work done.								Per cent of pupils recommended.
												Pupils taking one or more subjects.				Pupils making up the work required for promotion.				
	Boys.	Girls.	Total.	Boys.	Girls.	Total.				Male.	Female.	One.	Two.	More.	Total.	One.	Two.	Three.	Total.	
Review schools:																				
White—																				
Eastern High School..	....	114	114	....	82	82	92	88	.96	....	2	83	11	....	94	52	10	....	62	.66
School No. 70.........	64	48	112	51	33	84	95	76	.80	2½	1	24	58	23	105	22	31	15	68	.65
School No. 75.........	114	123	237	85	105	190	210	191	.91	1	4	50	142	45	237	41	100	31	172	.73
School No. 93.........	164	144	308	140	124	264	286	264	.92	2	6	116	161	31	308	79	112	18	209	.68
Total white..........	342	429	771	276	344	620	683	619	.91	5½	13	273	372	90	744	194	253	64	511	.69
Colored—																				
School No. 103........	72	121	193	57	88	145	159	119	.75	4	....	34	112	47	193	21	38	13	72	.37
												Sheet metal work.	Carpentry.	Printing.	Drawing.	Millinery.	Sewing.	Cooking.		
Vocational school—																				
No. 70................	176	189	365	107	90	197	234	186	.79	5½	4	54	43	41	42	57	96	32		
Total all summer schools..	590	739	1329	440	522	962	1076	924	.86	15	17	About 20% of these pupils attend no other school; the balance came from public and private schools throughout the city.								

Table 10 is the grand summary showing the number of pupils of all kinds that were enrolled in the schools of this city during 1912-1913. It is not reasonable to compare the totals with those of the previous year, since there is the added feature of summer vacation schools.

TABLE 10.

TOTAL ENROLLMENT IN SCHOOLS OF EVERY KIND, 1912-13—GRAND SUMMARY.

SCHOOLS.	White schools.			Colored schools.			All schools.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
Day schools..............	31,532	30,734	62,266	5,078	6,476	11,554	36,610	37,210	73,820
Night schools.............	3,927	3,133	7,060	700	1,028	1,728	4,627	4,161	8,788
Summer vacation schools..	518	618	1,136	72	121	193	590	739	1,329
	35,977	34,485	....	5,850	7,625	....	41,827	42,110	....
Totals..............	....	....	70,462	....	....	13,475	....	....	83,937

TABLE 11.

Showing the number of pupils and teachers in the public schools at the time of making the report each year, from the year 1829, when the first public school was opened, to the year 1913, inclusive. This statement does not include night schools or summer schools.

Date.	Teachers.	Pupils.	Date.	Teachers.	Pupils.
1829	3	269	1872	581	25,092
1830	5	402	1873	558	26,663
1831	5	627	1874	626	27,634
1832	5	640	1875	672	29,942
1833	5	544	1876	717	31,071
1834	8	859	1877	734	32,523
1835	8	747	1878	784	34,002
1836	8	814	1879	798	35,595
1837	8	659	1880	799	35,297
1838	8	675	1881	824	35,630
1839	16	1,126	1882	826	35,639
1840	22	1,834	1883	855	37,546
1841	27	2,331	1884	893	38,618
1842	28	2,464	1885	930	39,828
1843	30	2,669	1886	972	39,779
1844	38	3,366	1887	994	41,199
1845	52	4,313	1888	1,119	46,521
1846	65	5,087	1889	1,187	48,850
1847	90	6,439	1890	1,244	50,899
1848	100	6,696	1891	1,301	52,543
1849	110	6,763	1892	1,382	54,406
1850	119	7,093	1893	1,464	57,048
1851	138	8,011	1894	1,557	59,808
1852	175	9,081	1895	1,614	61,271
1853	186	9,447	1896	1,719	63,087
1854	207	9,717	1897	1,794	64,602
1855	217	10,588	1898	1,827	65,170
1856	238	11,441	1899	1,802	65,289
1857	245	11,269	1900	1,676	64,720
1858	256	11,587	1901	1,647	64,918
1859	267	11,750	1902	1,679	66,399
1860	284	13,186	1903	1,689	67,368
1861	295	13,424	1904	1,692	68,093
1862	311	13,888	1905	1,635	67,964
1863	333	14,874	1906	1,657	69,446
1864	343	15,319	1907	1,686	68,723
1865	366	15,957	1908	1,684	68,926
1866	402	17,550	1909	1,682	68,120
1867	490	22,073	1910	1,723	67,508
1868	537	21,903	*1911	1,696	62,652
1869	540	23,552	1912	1,739	63,323
1870	549	23,898	1913	1,890	66,506
1871	559	24,479			

*Six months only, January to June. Prior to 1911, annual reports covered the calendar year; subsequent to 1911, they cover the scholastic year, September to June inclusive.

White Schools.

It is very desirable to strike the balance showing the gain or loss by reason of pupils entering this system from other schools and those leaving this system to attend other schools, as well as in the matter of withdrawals, which latter has always been done.

Table 12 has been prepared to meet this need. It shows the number of pupils who entered our schools from each of the several sources. A comparison with the later tables showing withdrawals enables one to see whether or not our schools are gaining or losing as stated. This table, in addition, meets the requirements of the United States Bureau of Education in that it will enable that bureau to avoid duplicating entries.

TABLE 12.

Enrollment—White Pupils.

Showing number of white pupils admitted to the schools by sources whence they came and by grades of schools entered during the scholastic year 1912-13.

Sources.	Number of pupils admitted during scholastic year 1912-13.											
	Normal schools.			Secondary schools.			Elementary schools.			All white schools.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
June, 1912, roll	3	138	141	2,019	2,264	4,283	22,605	21,920	44,525	24,627	24,322	48,949
Private schools		4	4	55	28	83	769	653	1,422	824	685	1,509
Public schools in this state outside of city		3	3	56	54	110	599	594	1,193	655	651	1,306
Public schools in other states		3	3	38	35	73	545	572	1,117	583	610	1,193
All other sources	1	4	5	7	8	15	4,835	4,454	9,289	4,843	4,466	9,309
Totals	4	152	156	2,175	2,389	4,564	29,353	28,193	57,546	31,532	30,734	62,266

Tables 13, 14, 15, 16, and 17 refer to the white normal school. Less significance attaches to the matter of ages or the time in school and other points than to the secondary and elementary schools. It is well, however, to note table 14, so as to see the amount of previous educational work done by those who expect to engage in the work of teaching.

TABLE 13.

Distribution of white pupils in normal schools by ages and grades, June 30, 1913. Showing also for each grade and for totals by ages the number of pupils under normal age, of normal age, and over normal age (retarded). Normal ages for each grade shown between the heavy horizontal lines in body of table.

Ages.	First Year.			Second Year.			Totals by Ages.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
16-17	....	1	1	....	....	....	....	1	1
17-18	....	3	3	....	....	....	....	3	3
18-19	....	18	18	....	2	2	....	20	20
19-20	....	31	31	1	16	17	1	47	48
20-21	2	8	10	....	20	20	2	28	30
21	1	5	6	....	14	14	1	19	20
Totals by grades	3	66	69	1	52	53	4	118	122
Under normal age	....	4	4	....	2	2	....	6	6
Normal	....	49	49	1	36	37	1	85	86
Over normal age	3	13	16	....	14	14	3	27	30

TABLE 14.

Distribution of white pupils in normal schools by years in school and grades, June 30, 1913. Showing also for each grade and for totals the number who have been in schools less than normal time (accelerated), normal time, and more than normal time (repeating). Normal time shown between the heavy horizontal lines in body of table.

Years in School.	First Year.			Second Year.			Totals by Years.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
10-11	....	6	6	....	1	1	....	7	7
11-12	....	9	9	....	2	2	....	11	11
12-13	1	14	15	....	....	....	1	14	15
13-14	1	34	35	1	17	18	2	51	53
14-15	....	3	3	....	29	29	....	32	32
15-16	1	....	1	....	3	3	1	3	4
Totals by grades	3	66	69	1	52	53	4	118	122
Less than normal	....	15	15	....	3	3	....	18	18
Normal	2	48	50	1	46	47	3	94	97
More than normal	1	3	4	....	3	3	1	6	7

TABLE 15.

Distribution of white pupils in normal schools permanently withdrawn from this system during the scholastic year ending June 30, 1913, by causes and grades.

CAUSES.	First Year.			Second Year.			Totals by Causes.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
To go to work	....	1	1	....	....	....	....	1	1
Non-promotion	....	....	....	....	2	2	....	2	2
Indifference	....	....	....	....	....	....	....	....	....
Physical disability or death.	....	....	....	....	5	5	....	5	5
Left the city	....	1	1	....	....	....	....	1	1
To private schools	....	2	2	....	....	....	....	2	2
Graduated	....	....	....	....	7	7	....	7	7
Other causes	....	14	14	....	2	2	....	16	16
Totals by grades	....	18	18	....	16	16	....	34	34

TABLE 16.

Distribution of white pupils in normal schools permanently withdrawn from this system during the scholastic year ending June 30, 1913, by ages and grades.

Between Ages.	First Year.			Second Year.			Totals by Ages.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
16-17	....	1	1	....	....	....	....	1	1
17-18	....	2	2	....	....	....	....	2	2
18-19	....	6	6	....	1	1	....	7	7
19-20	....	4	4	....	7	7	....	11	11
20-21	....	5	5	....	7	7	....	12	12
21	....	....	....	....	1	1	....	1	1
Totals by grades	....	18	18	....	16	16	....	34	34
Under normal age	....	3	3	....	1	1	....	4	4
Normal	....	10	10	....	14	14	....	24	24
Over normal age	....	5	5	....	1	1	....	6	6

TABLE 17.

Distribution of attendance in white normal schools by number of days and grades.

TIME ATTENDING.	First Year.			Second Year.			Totals by Time.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
Entire year	....	12	12	....	10	10	....	22	22
At least 180 days	3	52	55	1	41	42	4	93	97
From 160-179 days	....	1	1	....	1	1	....	2	2
From 140-159 days	....	2	2	....	....	....	....	2	2
From 120-139 days	....	1	1	....	....	....	....	1	1
From 100-119 days	....	1	1	....	9	9	....	10	10
From 80- 99 days	....	1	1	....	1	1	....	2	2
From 60- 79 days	....	1	1	....	....	....	....	1	1
From 40- 59 days	....	3	3	....	3	3	....	6	6
From 20- 39 days	....	2	2	....	2	2	....	4	4
Less than 20 days	....	8	8	....	1	1	....	9	9
Totals by grades	3	84	87	1	68	69	4	152	156

Tables 18 to 25, inclusive, refer to the white secondary schools. The elementary and the secondary schools being but two portions of one continuous system of education, the figures presented in the foregoing tables will be studied and charted at the same time as those in the elementary schools. The tables are held separate for readiness of reference and for integrating the problems specially pertaining to those schools.

Besides the table showing the number of pupils of normal age, under age, and over age, similar to last year, additional tables are furnished this year for all the schools showing the relation of the number of years in school to the grade attained, thereby giving real acceleration and repetition, the number of pupils withdrawing from each of the several grades, the causes from which they withdraw, and the ages at which they withdraw. Table 21 is added to show the number of pupils who withdrew during the vacation of 1913, thus giving the total loss by withdrawal from those enrolled in the schools during the previous scholastic year (1912-13). These figures will be charted along with those of the first eight grades after those tables have been presented.

Another new table this year is that giving the attendance of pupils by groups of days. Table 25 shows the attendance of the high school pupils during the entire year. This, of course, includes those who may have withdrawn at some time during the year as well as those who continued to the close of the term. From this table it is very easily seen that by far the greater number of these children are very regular in their attendance, 214 of them having no absence whatever, 306 attending from 180 days to 191, and 2,566 attending 160 to 179 days. The relation of irregular attendance to non-promotion can be worked out by comparing this table with the table showing non-promotions.

TABLE 18.

DISTRIBUTION OF WHITE PUPILS IN SECONDARY SCHOOLS BY AGES AND GRADES, JUNE 30, 1913.

Showing also for each grade and for totals by ages the number of pupils under normal age, of normal age, and over normal age (retarded). Normal ages for each grade shown between the heavy horizontal lines in body of table.

AGES.	First Year.			Second Year.			Third Year.			Fourth Year.			Totals by Ages.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
12-13	2	3	5	.....	2	2	.....	.....	.....	.....	.....	.....	2	5	7
13-14	74	49	123	8	13	21	.....	.....	.....	.....	.....	.....	82	62	144
14-15	236	217	453	39	60	99	1	6	7	.....	.....	.....	276	283	559
15-16	293	273	566	114	147	261	26	43	69	.....	2	2	433	465	898
16-17	178	175	353	161	181	342	83	124	207	4	38	42	426	518	944
17-18	42	45	87	86	106	192	87	153	240	50	*120	*170	265	424	689
18-19	14	7	21	23	29	52	46	58	104	146	*146	*292	229	240	469
19-20	1	1	2	11	.....	11	18	9	27	33	48	81	63	58	121
20-21	4	.....	4	2	.....	2	3	2	5	11	8	19	20	10	30
21-over	.....	.....	.....	.....	.....	.....	3	.....	3	6	.....	6	9	.....	9
Totals by grades	844	770	1,614	444	538	982	267	395	662	250	362	612	1,805	2,065	3,870
Under normal age	76	52	128	47	75	122	27	49	76	4	40	44	154	216	370
Normal age	529	490	1,019	275	328	603	170	277	447	196	266	462	1,170	1,361	2,531
Over normal age	239	228	467	122	135	257	70	69	139	50	56	106	481	488	969

*Includes four girls in post-graduate class.

TABLE 19.

DISTRIBUTION OF WHITE PUPILS IN SECONDARY SCHOOLS BY YEARS IN SCHOOL AND GRADES, JUNE 30, 1913.

Showing also for each grade and for totals, the number who have been in schools less than normal time (accelerated), normal time, and more than normal time (repeating). Normal time shown between the heavy horizontal lines in body of table.

YEARS IN SCHOOL.	First Year.			Second Year.			Third Year.			Fourth Year.			Totals by Years.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
5- 6	......	......	......	......	1	1	......	......	......	......	......	......	......	1	1
6- 7	......	5	5	......	2	2	......	1	1	......	......	......	......	8	8
7- 8	81	77	158	6	33	39	10	6	16	......	3	3	97	119	216
8- 9	592	556	1,148	23	105	128	8	17	25	......	2	2	623	680	1,303
9-10	145	116	261	307	329	636	31	98	129	......	15	15	483	558	1,041
10-11	26	15	41	97	61	158	180	245	425	......	47	47	303	368	671
11-12	......	1	1	10	7	17	31	26	57	92	*270	362	133	304	437
12-13	......	......	......	1	......	1	6	2	8	147	*15	162	154	17	171
13-14	......	......	......	......	......	......	1	......	1	11	10	21	12	10	22
Totals by grades.....	844	770	1,614	444	538	982	267	395	662	250	362	612	1,805	2,065	3,870
Less than normal..........	81	82	163	29	141	170	49	122	171	......	67	67	159	412	571
Normal	592	556	1,148	307	329	636	180	245	425	92	270	362	1,171	1,400	2,571
More than normal..........	171	132	303	108	68	176	38	28	66	158	25	183	475	253	728

*Includes four girls in post-graduate class.

TABLE 20.

WITHDRAWALS BY CAUSES.

Distribution of white pupils in secondary schools permanently withdrawn from this system during the scholastic year ending June 30, 1913, by causes and grades.

Causes.	First Year.			Second Year.			Third Year.			Fourth Year.*			Totals by Causes.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
Gone to work	119	14	133	48	3	51	27	4	31	6	1	7	200	22	222
Non-promotion	1	.....	1	1	.....	1	1	.....	1	10	.....	10	13	.....	13
Indifference	1	2	3	1	.....	1	1	.....	1	.....	.....	.....	3	2	5
Physical disability or death	.....	43	43	2	12	14	.....	11	11	1	3	4	3	69	72
Left the city	15	15	30	13	8	21	8	6	14	3	2	5	39	31	70
To private schools	16	20	36	12	14	26	3	11	14	6	.....	6	37	45	82
Graduated from high schools	.....	.....	.....	.....	.....	.....	.....	.....	.....	38	17	55	38	17	55
Other causes	21	81	102	10	34	44	5	16	21	1	7	8	37	138	175
Totals by grades	173	175	348	87	71	158	45	48	93	65	30	95	370	324	694

*Includes one girl in post-graduate class.

TABLE 21.

CAUSES STATED FOR WITHDRAWAL OF WHITE PUPILS FROM SECONDARY SCHOOLS.

CAUSES.	Number of pupils permanently withdrawn.									Per cent of total number withdrawn.
	During scholastic year 1912-13.			During vacation, 1913.			Totals.			
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals	
Work	200	22	222	.....	3	3	200	25	225	12.2
Lack of success	13	.....	13	2	27	29	15	27	42	2.3
Indifference	3	2	5	.....	4	4	3	6	9	0.5
Physical disability or death	3	69	72	.....	5	5	3	74	77	4.2
Left the city	39	31	70	3	4	7	42	35	77	4.2
To private schools	37	45	82	14	14	28	51	59	110	6.0
Graduated	38	17	55	230	345	575	268	362	630	34.1
Other causes	37	138	175	142	245	387	179	383	562	30.5
Causes unknown	.....	.....	.....	110	.....	110	110	.....	110	6.0
Totals	370	324	694	501	647	1,148	871	971	1,842	.....

TABLE 22.

WITHDRAWALS BY AGES.

Distribution of white pupils in secondary schools permanently withdrawn from this system during the scholastic year ending June 30, 1913, by ages and grades.

BETWEEN AGES.	First Year.			Second Year.			Third Year.			Fourth Year.			Totals by Ages.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
12-13	.....	4	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	4
13-14	6	5	11	.....	2	2	.....	.....	.....	.....	.....	.....	6	7	13
14-15	36	32	68	2	4	6	.....	.....	.....	1	.....	1	39	36	75
15-16	50	59	109	17	19	36	1	5	6	.....	.....	.....	68	83	151
16-17	52	56	108	26	25	51	7	10	17	2	4	6	87	95	182
17-18	16	16	32	29	12	41	14	22	36	17	3	20	76	53	129
18-19	8	2	10	8	6	14	19	10	29	16	10	26	51	28	79
19-20	4	1	5	5	3	8	3	1	4	18	*7	25	30	12	42
20-21	.....	.....	.....	.....	.....	.....	1	.....	1	9	6	15	10	6	16
21	1	.....	1	.....	.....	.....	.....	.....	.....	2	.....	2	3	.....	3
Totals by grades	173	175	348	87	71	158	45	48	93	65	30	95	370	324	694
Under normal age	6	9	15	2	6	8	1	5	6	3	4	7	12	24	36
Normal	86	91	177	43	44	87	21	32	53	33	13	46	183	180	363
Over normal age	81	75	156	42	21	63	23	11	34	29	13	42	175	120	295

*Includes one girl in post-graduate class.

TABLE 23.

AGES OF WHITE PUPILS PERMANENTLY WITHDRAWN FROM SECONDARY SCHOOLS.

Ages.	Number of pupils permanently withdrawn.								
	During scholastic year 1912-13.			During vacation 1913.			Totals.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
12-13	.....	4	4	.....	.....	.....	.....	4	4
13-14	6	7	13	6	.....	6	12	7	19
14-15	39	36	75	36	24	60	75	60	135
15-16	68	83	151	56	61	117	124	144	268
16-17	87	95	182	119	128	247	206	223	429
17-18	76	53	129	119	183	302	195	236	431
18-19	51	28	79	90	155	245	141	183	324
19-20	30	12	42	45	81	126	75	93	168
20-21	10	6	16	23	13	36	33	19	52
21	3	.....	3	7	2	9	10	2	12
Totals	370	324	694	501	647	1,148	871	971	1,842

TABLE 24.

WITHDRAWALS BY GRADES.

Grades in secondary white schools from which pupils were withdrawn.

GRADES.	Number of pupils permanently withdrawn.									Per cent of total enrollment in grade.
	During scholastic year 1912-13.			During vacation 1913.			Totals.			
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	
First year	173	175	348	162	162	324	335	337	672	34.2
Second year	87	71	158	76	95	171	163	166	329	28.9
Third year	45	48	93	22	39	61	67	87	154	20.4
Fourth year	27	13	40	11	6	17	38	19	57	8.1
Graduates	38	17	55	230	345	575	268	362	630	89.1
Totals	370	324	694	501	647	1,148	871	971	1,842	40.3 *26.6

*Excludes graduates.

TABLE 25.

ATTENDANCE.

Distribution of attendance in white secondary schools by number of days and grades.

TIME ATTENDING.	First Year.			Second Year.			Third Year.			Fourth Year.			Totals by Time.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
Entire year	49	34	83	46	13	59	25	12	37	16	19	35	136	78	214
At least 180 days	167	.....	167	53	.....	53	50	.....	50	36	.....	36	306	.....	306
From 160 to 179 days	421	565	986	251	394	645	158	305	463	163	*309	472	993	1,573	2,566
From 140 to 159 days	112	111	223	84	106	190	41	64	105	38	*38	76	275	319	594
From 120 to 139 days	34	49	83	23	25	48	12	16	28	5	9	14	74	99	173
From 100 to 119 days	33	19	52	15	14	29	12	7	19	9	9	18	69	49	118
From 80 to 99 days	111	44	155	24	18	42	6	9	15	40	.....	40	181	71	252
From 60 to 79 days	24	32	56	13	12	25	3	3	6	5	1	6	45	48	93
From 40 to 59 days	14	22	36	7	18	25	1	14	15	2	1	3	24	55	79
From 20 to 39 days	14	41	55	6	4	10	3	5	8	.....	2	2	23	52	75
Less than 20 days	38	28	66	9	5	14	1	8	9	1	4	5	49	45	94
Totals by grades	1,017	945	1,962	531	609	1,140	312	443	755	315	392	707	2,175	2,389	4,564

*Includes four girls in post-graduate class.

WHITE ELEMENTARY SCHOOLS.

Table 26 shows the ages of the pupils in the several grades. The numbers of children under age, of normal age, and over age are given.

Following the system of other cities, two succeeding years are taken as the period covering normal age; for instance, pupils between 6 and 8 years of age are counted as being of normal age for the first grade. As will be seen later, in considering the number of pupils over time and the number of pupils repeating, this produces a seeming absurdity; because we shall have a greater number of pupils over time than are over age and also a still larger number who are repeating. As a matter of fact, by far the greater number of children who enter the first grade do so shortly after their sixth birthday; and it would be entirely proper to hold the one year, from six to seven, as the normal age for pupils of the first grade. This would show a greater number of pupils over age; but since that is the real fact, it ought to be so shown, and we should then be able, by making a proper comparison with the over time pupils, to see the extent to which late entrance into the schools affects the progress of pupils through the grades. This paragraph is written not only for the information of the Board of Superintendents, but also to bring the matter definitely before the National Bureau of Education and the superintendents of other cities who may receive and read our report.

TABLE 26.

GRADE—AGE.

Distribution of white pupils in elementary schools by ages and grades, June 30, 1913. Showing also for each grade and for totals by ages the number of pupils under normal age, of normal age, and over normal age (retarded). Normal ages for each grade shown between heavy horizontal lines in body of table.

Ages.	First Grade.			Second Grade.			Third Grade.			Fourth Grade.			Fifth Grade.			Sixth Grade.			Seventh Grade.			Eighth Grade.			Totals by Ages.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
5- 6	17	13	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17	13	30
6- 7	1,269	1,156	2,425	18	17	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,287	1,173	2,460
7- 8	2,235	2,024	4,259	767	802	1,569	43	34	77	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,045	2,860	5,905
8- 9	978	797	1,775	1,740	1,781	3,521	612	685	1,297	33	39	72	1	2	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,364	3,304	6,668
9-10	310	259	569	1,095	947	2,042	1,389	1,473	2,862	477	544	1,021	41	29	70	.....	2	2	.....	.....	.....	.....	.....	.....	3,312	3,254	6,566
10-11	110	106	216	506	424	930	1,042	1,023	2,065	1,082	1,250	2,332	390	448	838	41	55	96	2	4	6	.....	1	1	3,173	3,311	6,484
11-12	40	38	78	172	135	307	551	502	1,053	971	940	1,911	900	940	1,840	333	381	714	40	42	82	4	3	7	3,011	2,981	5,992
12-13	16	15	31	99	84	183	358	298	656	670	621	1,291	918	886	1,804	720	879	1,599	281	366	647	58	48	106	3,120	3,197	6,317
13-14	8	8	16	52	37	89	188	148	336	473	333	806	646	607	1,253	695	733	1,428	521	651	1,172	239	270	509	2,822	2,787	5,609
14-15	1	3	4	14	10	24	75	47	122	177	96	273	245	193	438	334	293	627	404	387	791	386	436	822	1,636	1,465	3,101
15-16	4	1	5	9	7	16	19	11	30	24	17	41	60	57	117	133	83	216	217	161	378	287	312	599	753	649	1,402
16-17	.....	1	1	.....	1	1	3	1	4	10	5	15	17	2	19	22	18	40	46	48	94	94	95	189	192	171	363
17-18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	2	1	3	3	2	5	8	6	14	24	25	49	37	35	72
18-19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1	3	1	1	2	3	2	5
19-20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	1	.....	1
Totals by grades.	4,988	4,421	9,409	4,472	4,245	8,717	4,280	4,222	8,502	3,917	3,846	7,763	3,220	3,165	6,385	2,281	2,446	4,727	1,521	1,666	3,187	1,094	1,191	2,285	25,773	25,202	50,975
Under normal age.	17	13	30	18	17	35	43	34	77	33	39	72	42	31	73	41	57	98	42	46	88	62	52	114	298	289	587
Normal	3,504	3,180	6,684	2,507	2,583	5,090	2,001	2,158	4,159	1,559	1,794	3,353	1,290	1,388	2,678	1,053	1,260	2,313	802	1,017	1,819	625	706	1,331	13,341	14,086	27,427
Over normal age.	1,467	1,228	2,695	1,947	1,645	3,592	2,236	2,030	4,266	2,325	2,013	4,338	1,888	1,746	3,634	1,187	1,129	2,316	677	603	1,280	407	433	840	12,134	10,827	22,961

Table 27 and Fig. 1, following it, present and chart the number and rate per cent of pupils who are over age for their grade based upon the table and method just mentioned. It will be noticed there is a steady increase in the percentage of retardation to the fifth grade, inclusive, following which there is a steady decrease in the rate per cent through the balance of the entire system. A comparison with the figures of last year shows a slight increase in the numbers of those over age, as indicated by the increased rate of nine-tenths of one per cent.

TABLE 27.

Showing number of white pupils under age for the grade, of normal age, over age (retarded), and the corresponding rates per cent for each grade of the elementary and the secondary schools, June 30, 1913.

GRADES.	Net roll or register, June 30, 1913.	Number of pupils.			Per cent of pupils.		
		Under age.	Normal age.	Over age.	Under age.	Normal age.	Over age.
Elementary							
First grade	9,409	30	6,684	2,695	0.3	71.1	28.6
Second grade	8,717	35	5,090	3,592	0.4	58.4	41.2
Third grade	8,502	77	4,159	4,266	0.9	48.9	50.2
Fourth grade	7,763	72	3,353	4,338	0.9	43.2	55.9
Fifth grade	6,385	73	2,678	3,634	1.1	41.9	57.0
Sixth grade	4,727	98	2,313	2,316	2.1	48.9	49.0
Seventh grade	3,187	88	1,819	1,280	2.8	57.0	40.2
Eighth grade	2,285	114	1,331	840	5.0	58.2	36.8
Totals	50,975	587	27,427	22,961	1.1	53.8	45.1
Secondary							
First year	1,614	128	1,019	467	7.9	63.2	28.9
Second year	982	122	603	257	12.2	61.4	26.4
Third year	662	76	447	139	11.6	67.4	21.0
Fourth year	612	44	462	106	7.2	75.5	17.3
Totals	3,870	370	2,531	969	9.6	65.4	25.0
Gross totals	54,845	957	29,958	23,930	1.7	54.6	43.7

Fig. 1a—Normal Age.

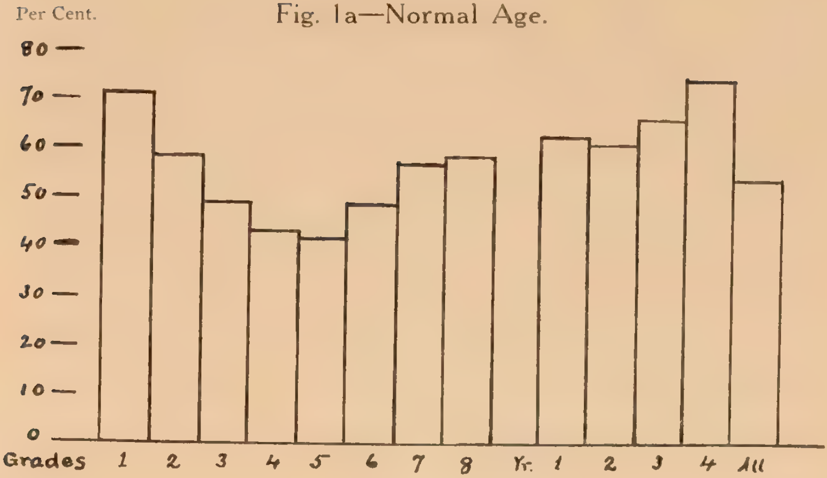

Fig 1b—Under Age.

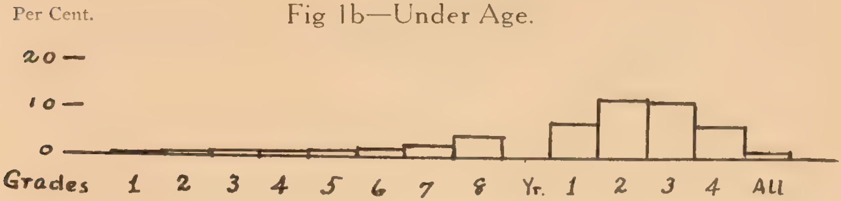

Fig. 1c—Over Age.

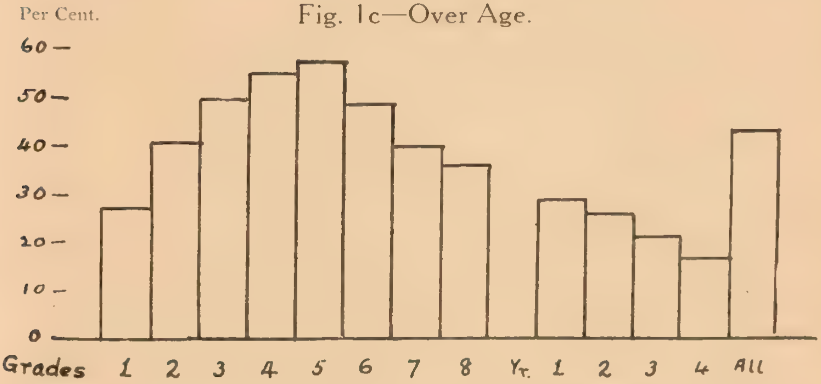

Fig. 1—Graphs illustrating table 27: (a) The several columns show the per cent of white pupils in the several grades of the elementary and the secondary schools on June 30, 1913, who were of normal age for the grade; (b) the per cent of under-age pupils; (c) the per cent of over-age pupils.

Table 28 and its accompanying summary, table 29, with rates per cent and illustrative chart, Fig. 2, show more definitely the school responsibility for the advancement of children, by giving the number of years the children have been at school. In this table a child who has been at school for but one year is supposed by right to be in the first grade. If he shall have been at school two years, he ought to be in the second grade under normal conditions. If he still remains in the first grade, he is one year over time, and so on for each successive grade. The table, therefore, shows the number of children who have taken the normal time to accomplish the grade work, those who have accomplished it in less than normal time, a real acceleration, and those who have required more than normal time, which is a real repetition.

As mentioned previously, the seeming absurdity of the over age figures now becomes apparent; for instance, comparing table 29 with table 27, in the grades 22,961 pupils appear to be over age, while the number over time is shown to be 27,565. One would expect the number over age to be somewhat less than the number over time, because of the number repeating grades; but the difference is too great. One can hardly suppose that nearly 5,000 children were admitted to the first grade under six years of age when the actual grade age table shows but 30 to have been so admitted for the past scholastic year.

The percentage of normal time pupils is highest in the first grade and decreases steadily to the sixth grade with a marked advance in the seventh and eighth grades. The secondary schools show a still greater percentage of normal time pupils, all of which is proper and to be expected. The rates per cent of over time pupils show that the crucial grades are the fourth, fifth, and sixth. These correspond to the grades containing the largest percentage of over age children. The chart graphically illustrates these points.

TABLE 28.

GRADE TIME.

Distribution of white pupils in elementary schools by years in school and grades, June 30, 1913. Showing also for each grade and for totals, the number who have been in schools less than normal time (accelerated), normal time, and more than normal time (repeating). Normal time shown between heavy horizontal lines in body of table.

YEARS IN SCHOOL.	First Grade.			Second Grade.			Third Grade.			Fourth Grade.			Fifth Grade.			Sixth Grade.			Seventh Grade.			Eighth Grade.			Totals by Years.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
0 1	3,286	2,966	6,252	138	140	278	20	11	31	2	1	3	3	.....	3	1	1	2	1	.....	1	.....	.....	.....	3,451	3,119	6,570
1 2	1,198	1,062	2,260	2,101	2,147	4,248	140	168	308	8	15	23	5	1	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,452	3,393	6,845
2 3	412	297	709	1,373	1,282	2,655	1,569	1,635	3,204	138	190	328	13	6	19	3	1	4	1	.....	1	.....	.....	.....	3,509	3,411	6,920
3 4	72	77	149	588	475	1,063	1,294	1,324	2,618	1,089	1,144	2,233	128	155	283	20	17	37	1	2	3	.....	.....	.....	3,192	3,194	6,386
4 5	14	14	28	202	138	340	702	667	1,369	1,178	1,210	2,388	892	909	1,801	129	163	292	16	12	28	1	2	3	3,134	3,115	6,249
5 6	6	5	11	47	47	94	357	267	624	833	740	1,573	972	1,019	1,991	635	725	1,360	119	158	277	16	18	34	2,985	2,979	5,964
6 7	.....	.....	.....	13	13	26	145	108	253	455	389	844	757	713	1,470	787	877	1,664	504	662	1,166	124	149	273	2,785	2,911	5,696
7 8	.....	.....	.....	7	2	9	46	32	78	161	118	279	347	268	615	489	482	971	541	521	1,062	394	515	909	1,985	1,938	3,923
8- 9	.....	.....	.....	3	1	4	6	10	16	40	36	76	83	83	166	159	136	295	235	238	473	393	369	762	919	873	1,792
9 10	.....	.....	.....	.....	.....	.....	1	.....	1	11	2	13	16	10	26	52	40	92	83	58	141	133	119	252	296	229	525
10-11	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1	3	4	1	5	6	4	10	17	12	29	25	18	43	54	36	90
11-12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	2	4	7	1	8	9	3	12
12 13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	2	1	.....	1	2	1	3
13 14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
14 15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15 16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals by grades.	4,988	4,421	9,409	4,472	4,245	8,717	4,280	4,222	8,502	3,917	3,846	7,763	3,230	3,165	6,385	2,281	2,446	4,727	1,521	1,666	3,187	1,094	1,191	2,285	25,773	25,202	50,975
Less than normal.	.....	.....	.....	138	140	278	160	179	339	148	206	354	149	162	311	153	182	335	138	172	310	141	169	310	1,027	1,210	2,237
Normal	3,286	2,966	6,252	2,101	2,147	4,248	1,569	1,635	3,204	1,089	1,144	2,233	892	909	1,801	635	725	1,360	504	662	1,166	394	515	909	10,470	10,703	21,173
More than normal.	1,702	1,455	3,157	2,233	1,958	4,191	2,551	2,408	4,959	2,680	2,496	5,176	2,179	2,094	4,273	1,493	1,539	3,032	879	832	1,711	559	507	1,066	14,276	13,289	27,565

TABLE 29.

Showing number of white pupils who have been at school less than the normal number of years according to the grade attained, the number similarly normal in time, the number over time, and the corresponding rates per cent for each grade of the elementary and the secondary schools, June 30, 1913.

Grades.	Net roll or register, June 30, 1913.	Number of pupils.			Per cent of pupils.		
		Under time.	Normal time.	Over time.	Under time.	Normal time.	Over time.
Elementary							
First grade......	9,409	0	6,252	3,157	0.0	66.5	33.5
Second grade....	8,717	278	4,248	4,191	3.2	48.7	48.1
Third grade.....	8,502	339	3,204	4,959	4.0	37.7	58.3
Fourth grade....	7,763	354	2,233	5,176	4.6	28.8	66.6
Fifth grade.....	6,385	311	1,801	4,273	4.9	28.2	66.9
Sixth grade.....	4,727	335	1,360	3,032	7.1	28.8	64.1
Seventh grade...	3,187	310	1,166	1,711	9.7	36.6	53.7
Eighth grade....	2,285	310	909	1,066	13.6	39.8	46.6
Totals.....	50,975	2,237	21,173	27,565	4.4	41.5	54.1
Secondary							
First year.......	1,614	163	1,148	303	10.1	71.2	18.7
Second year.....	982	170	636	176	17.3	64.8	17.9
Third year......	662	171	425	66	25.8	64.2	10.0
Fourth year.....	612	67	362	183	10.9	59.2	29.9
Totals......	3,870	571	2,571	728	14.7	66.5	18.8
Gross totals.......	54,845	2,808	23,744	28,293	5.1	43.3	51.6

Fig. 2a—Normal Time.

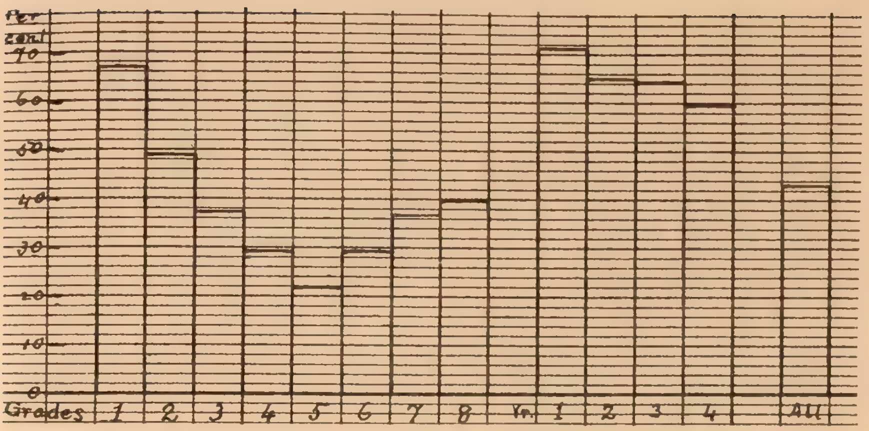

Fig. 2b—Under Time.

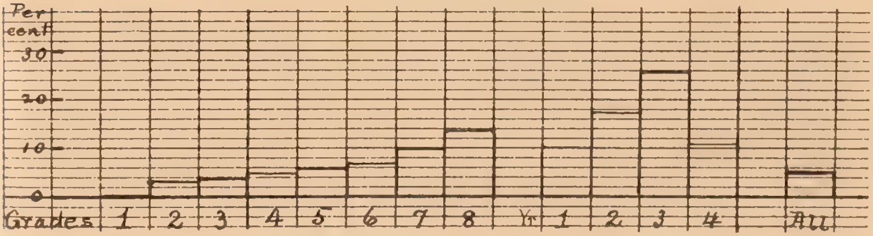

Fig. 2c—Over Time.

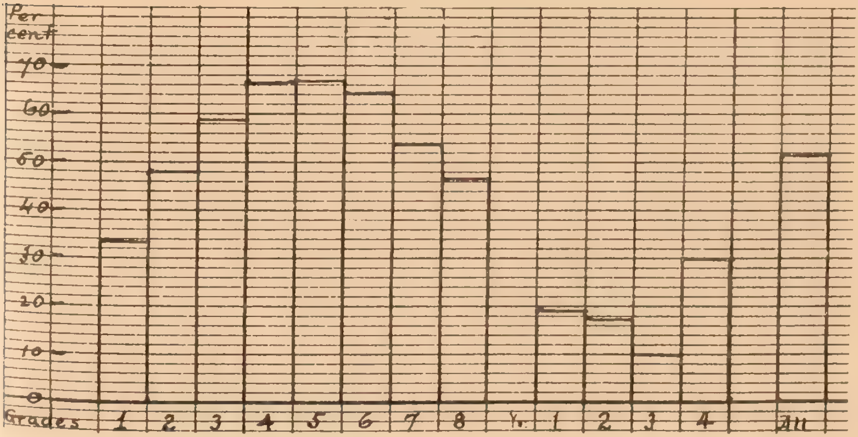

FIG. 2.—Graphs illustrating table 29: (a) The several columns show the per cent of white pupils in the several grades of the elementary and the secondary schools on June 30, 1913, who have been at school the normal number of years, according to the grade attained; (b) the per cent of under-time pupils; (c) the per cent of over-time pupils.

Table 30 shows the number of pupils withdrawn from each grade during the scholastic year and the causes for such withdrawals. The largest numbers are lost to our city by removal from the city. It is not to be supposed, however, that these children are permanently withdrawn from school altogether. It is probable that they continue their education in the schools of the localities to which they remove. The chief cause for absolute withdrawal from school is given as the necessity to go to work. The grade losing the largest number of children because of this reason is seen to be the seventh, with the sixth and fifth showing nearly the same loss.

Table 31 contains the supplementary figures for those withdrawn during vacation, and the chart is based upon the percentages shown in this table. Here again the column for work is prominent.

TABLE 30.

WITHDRAWALS BY CAUSES.

Distribution of white pupils of elementary schools permanently withdrawn from this system during the scholastic year ending June 30, 1913, by causes and grades.

CAUSES.	First Grade.			Second Grade.			Third Grade.			Fourth Grade.			Fifth Grade.			Sixth Grade.			Seventh Grade.			Eighth Grade.			Totals by Causes.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
To go to work	1	1	2	2	3	5	26	11	37	52	40	92	145	76	221	176	107	283	193	106	299	132	74	206	727	418	1,145
Non-promotion	...	...	....	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.....	1	1
Indifference	2	1	3	...	1	1	...	...	...	...	...	...	...	2	2	1	2	3	2	2	4	1	3	4	6	11	17
Physical disability or death	106	115	221	36	46	82	27	36	63	25	34	59	17	41	58	14	40	54	10	25	35	5	24	29	240	361	601
Left the city	249	268	517	212	173	385	165	178	343	164	146	310	83	102	185	71	76	147	42	45	87	21	24	45	1,007	1,012	2,019
To private schools	81	76	157	73	46	119	63	56	119	56	41	97	38	27	65	19	21	40	11	16	27	5	13	18	346	296	642
Graduated from high school	...	...	....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.....	.....	.....
Other causes	62	61	123	19	11	30	16	16	32	11	10	21	9	11	20	5	23	28	7	37	44	2	37	39	131	206	337
Totals by grades	501	522	1,023	342	280	622	297	298	595	308	271	579	292	259	551	286	269	555	265	231	496	166	175	341	2,457	2,305	4,762

TABLE 31.

Causes stated for withdrawal of white pupils from elementary schools.

Causes.	Number of pupils permanently withdrawn.									Per cent of total number withdrawn.
	During scholastic year 1912-13.			During vacation 1913.			Totals.			
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	
Work	727	418	1,145	591	463	1,054	1,318	881	2,199	28.3
Lack of success	.....	1	1	.....	1	1	.....	2	2	0.02
Indifference	6	11	17	1	1	2	7	12	19	0.3
Physical disability or death	240	361	601	42	55	97	282	416	698	9.0
Left the city	1,007	1,012	2,019	496	479	975	1,503	1,491	2,994	38.6
To private schools	346	296	642	315	293	608	661	589	1,250	16.1
Other causes	131	206	337	74	183	257	205	389	594	7.7
Totals	2,457	2,305	4,762	1,519	1,475	2,994	3,976	3,780	7,756	Boys 51.3 Girls 48.7

Fig. 3—Withdrawals, Causes.

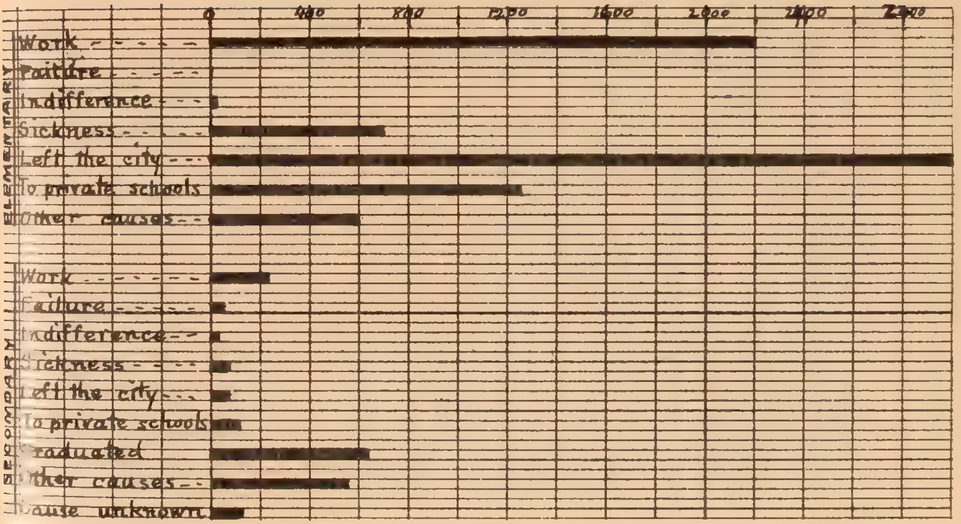

FIG. 3—Graph illustrating tables 31 and 21. The number of white pupils withdrawn from the elementary and the secondary schools during the scholastic year, for each of the causes given.

It is not only desirable to know why our children leave school, but at what age they leave school and from what grades they go. Tables 32 and 33 present figures for the ages, illustrated by the chart shown in Fig. 4; and table 34, with chart, Fig. 5, shows the grades from which they leave.

The effect of the School Attendance Law is very definitely seen in the number of children leaving immediately after the fourteenth birthday. One thousand three hundred and forty-six pupils withdrew at that age, the largest number for any age.

The first grade does not show so large a rate per cent of loss by withdrawals as some of the other grades, the basal number itself being so much greater; still, the fact that as many as 1,023 children drop out of the first grade of the elementary schools needs notice. Five hundred and seventeen of these children left the city, 157 of them entered private or parochial schools, 221 were withdrawn because of physical disability or death; thus nine-tenths of these withdrawals are beyond the control of the schools.

The grade having the next largest number of withdrawals, which would probably produce the highest rate per cent, is the sixth grade. One thousand and thirty-six children were lost by withdrawal during the scholastic year and during the summer vacation. Four hundred and eighty-one of these continued to the close of the year, but failed to return to schools in September. The number of pupils who failed to return to the schools after the summer vacation appears to be nearly half as many as those that leave during the scholastic year. The graph illustrating this table brings the points presented prominently before the eye.

TABLE 32.

WITHDRAWALS BY AGES.

Distribution of white pupils in elementary schools, permanently withdrawn from this system during the scholastic year ending June 30, 1913, by ages and grades.

BETWEEN AGES.	First Grade.			Second Grade.			Third Grade.			Fourth Grade.			Fifth Grade.			Sixth Grade.			Seventh Grade.			Eighth Grade.			Totals by Ages.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
5-7	202	228	430	10	5	15	....	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	212	234	446
7-8	155	168	323	66	60	126	3	7	10	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	225	235	460
8-9	89	66	155	96	86	182	44	44	88	4	5	9	...	...	...	...	...	...	...	...	...	...	...	...	233	201	434
9-10	29	36	65	61	50	111	70	71	141	37	37	74	1	4	5	1	1	2	...	...	...	...	...	...	199	199	398
10-11	13	10	23	46	35	81	55	61	116	63	59	122	19	21	40	2	5	7	...	...	...	...	...	...	198	191	389
11-12	7	6	13	23	18	41	40	51	91	42	35	77	37	45	82	23	19	42	2	1	3	...	...	...	174	175	349
12-13	1	3	4	17	16	33	38	22	60	62	48	110	49	45	94	36	39	75	13	18	31	...	1	1	216	192	408
13-14	3	3	6	14	4	18	18	21	39	49	38	87	62	67	129	63	70	133	23	43	66	12	16	28	244	262	506
14-15	....	1	1	6	3	9	20	14	34	38	39	77	82	57	139	95	88	183	103	79	182	52	67	119	396	348	744
15-16	2	...	2	3	3	6	8	6	14	9	8	17	31	13	44	48	25	73	88	64	152	54	57	111	243	176	419
16-17	....	1	1	...	...	...	1	...	1	3	2	5	11	7	18	17	21	38	30	23	53	38	26	64	100	80	180
17-18	....	...	....	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	3	3	6	7	6	13	11	10	21
18-19	....	...	....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	2	2	4	4	2	6
19-20	....	...	....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	1	2	....	2
Totals by grades	501	522	1,023	342	280	622	297	298	595	308	271	579	292	259	551	286	269	555	265	231	496	166	175	341	2,457	2,305	4,762
Under normal age	....	...	....	10	5	15	3	8	11	5	5	10	1	4	5	3	6	9	2	1	3	...	1	1	24	30	54
Normal	357	396	753	162	146	308	114	115	229	100	96	196	56	66	122	59	58	117	36	61	97	64	83	147	948	1,021	1,969
Over normal age	144	126	270	170	129	299	180	175	355	203	170	373	235	189	424	224	205	429	227	169	396	102	91	193	1,485	1,254	2,739

TABLE 33.

Ages of white pupils permanently withdrawn from elementary schools.

AGES.	Number of pupils permanently withdrawn.								
	Scholastic year 1912-13.			Vacation, 1913.			Totals.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
5 to 7	212	234	446	57	42	99	269	276	545
7 to 8	225	235	460	113	112	225	338	347	685
8 to 9	233	201	434	141	94	235	374	295	669
9 to 10	199	199	398	121	123	244	320	322	642
10 to 11	198	191	389	134	113	247	332	304	636
11 to 12	174	175	349	94	90	184	268	265	533
12 to 13	216	192	408	93	130	223	309	322	631
13 to 14	244	262	506	140	210	350	384	472	856
14 to 15	396	348	744	308	294	602	704	642	1,346
15 to 16	243	176	419	198	179	377	441	355	796
16 to 17	100	80	180	96	70	166	196	150	346
17 to 18	11	10	21	13	11	24	24	21	45
18 to 19	4	2	6	5	1	6	9	3	12
19 to 20	2	....	2	....	....	....	2	....	2
20 to 21	....	....	....	6	4	10	6	4	10
21	....	....	....	....	2	2	....	2	2
Totals	2,457	2.305	4.762	1.519	1,475	2,994	3,976	3,780	7,756

Fig. 4—Withdrawals, Ages.

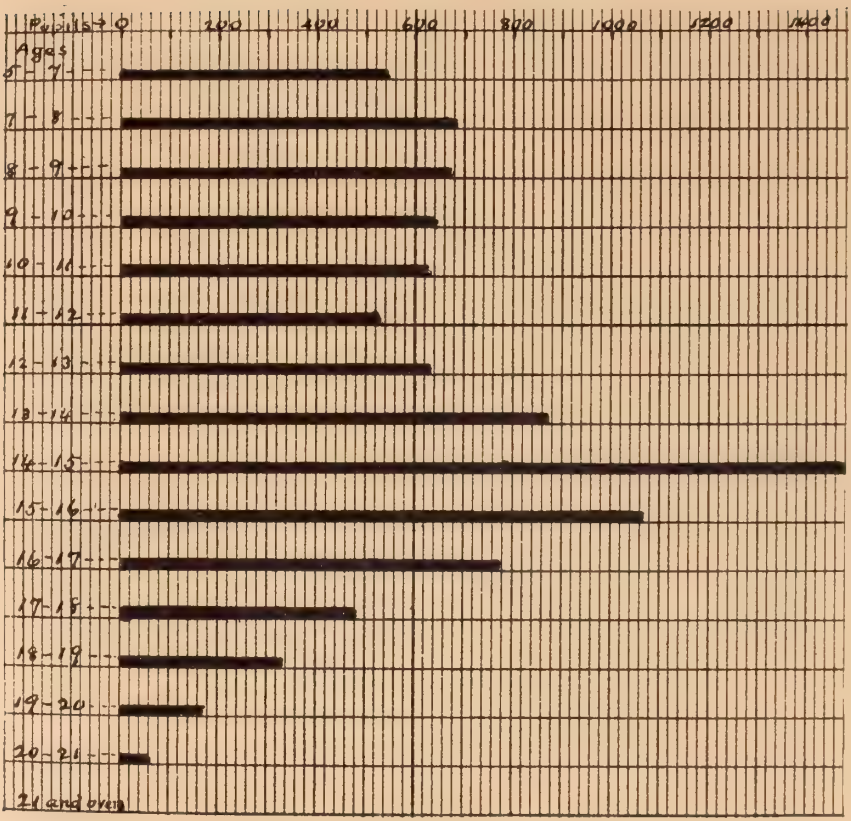

FIG. 4—Graph illustrating tables 33 and 23 combined. The number of pupils (white) withdrawn from elementary and secondary schools during the year, by ages.

TABLE 34.

Grades in white elementary schools from which pupils were withdrawn.

GRADES.	During scholastic year 1912-13.			During vacation, 1913.			Totals.			Per cent of total enrollment in grade.
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	
First	501	522	1,023	164	142	206	665	664	1.329	9.8
Second	342	280	622	200	166	366	542	446	988	6.6
Third	297	298	595	206	185	391	503	483	986	6.5
Fourth	308	271	579	186	191	377	494	462	956	6.9
Fifth	292	259	551	203	219	422	495	478	973	7.9
Sixth	286	269	555	230	251	481	516	520	1,036	10.5
Seventh	265	231	496	207	186	393	472	417	889	13.5
Eighth	166	175	341	123	135	258	289	310	599	13.0
Totals	2,457	2,305	4.762	1,519	1,475	2,994	3.976	3,780	7.756	8.5

Fig. 5—Withdrawals, Grades.

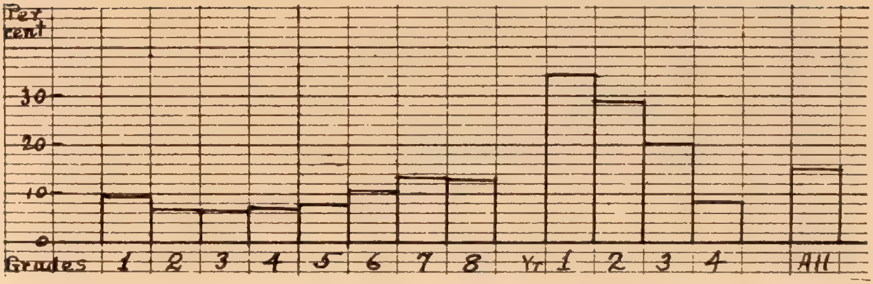

FIG. 5—Graph illustrating tables 34 and 24. The several columns represent the per cent of the total enrollment of white pupils during the scholastic year 1912-13 in the several grades, who were withdrawn, excluding the number graduated from secondary schools.

The next nine tables form a study of promotions, non-promotions, repeating, and the causes entering thereinto.

Table 37 summarizes the figures given in tables 35, 35b, and 36. The number of children promoted and the number not promoted for each grade are shown, thus fixing the total number who should be considered as candidates for promotion. These figures show that over 78.3% of all the children who were available for promotion during the year were advanced to the next grade. Twenty-one and seven-tenths per cent were not so advanced. The grade showing the largest percentage not promoted is the first. It will be illuminating to follow the figures of this grade through the various tables, particularly to note the causes given for non-promotion and the studies in which the failures occur. The matter of attendance should also be correlated therewith. It will be profitable to make a similar study for each and every grade. The tables have been prepared for this purpose. The chart graphically presents the points shown in the table.

TABLE 35.

PROMOTIONS.

Promotions of white pupils, normal and repeating, in elementary schools.

PROMOTIONS.	First Grade.			Second Grade.			Third Grade.			Fourth Grade.			Fifth Grade.			Sixth Grade.			Seventh Grade.			Eighth Grade.			Totals by Promotion.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
In grade first time.	2,248	2,235	4,483	2,593	2,629	5,222	2,308	2,435	4,743	2,032	2,101	4,133	1,658	1,848	3,506	1,367	1,456	2,823	950	1,127	2,077	890	990	1,880	14,046	14,821	28,867
In grade second time or longer..	1,511	1,291	2,802	1,139	998	2,137	1,011	992	2,003	947	861	1,808	657	607	1,264	381	383	764	200	247	447	51	57	108	5,897	5,436	11,333
Totals by grades.	3.759	3,526	7,285	3,732	3,627	7,359	3,319	3,427	6,746	2,979	2,962	5,941	2,315	2,455	4,770	1,748	1,839	3,587	1,150	1,374	2,524	941	1,047	1,988	19,943	20.257	40.200

TABLE 35-b.

Promotions of white pupils, with time in accomplishing grade work, in elementary schools.

TIME IN GRADES.	First Grade.			Second Grade.			Third Grade.			Fourth Grade.			Fifth Grade.			Sixth Grade.			Seventh Grade.			Eighth Grade.			Totals by Time.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
Less than ten months.........	248	242	490	301	267	568	225	194	419	170	146	316	125	143	268	99	85	184	47	65	112	86	111	197	1,301	1,253	2,554
Ten months......	2,000	1,993	3,993	2,292	2,362	4,654	2,083	2,241	4,324	1,862	1,955	3,817	1,533	1,705	3,238	1,268	1,371	2,639	903	1,062	1,965	804	879	1,683	12,745	13,568	26,313
More than ten months.........	1,511	1,291	2,802	1,139	998	2,137	1,011	992	2,003	947	861	1,808	657	607	1,264	381	383	764	200	247	447	51	57	108	5,897	5,436	11,333
Totals by grades.	3,759	3,526	7,285	3,732	3,627	7,359	3,319	3,427	6,746	2,979	2,962	5,941	2,315	2,455	4,770	1,748	1,839	3,587	1,150	1,374	2,524	941	1,047	1,988	19,943	20,257	40.200

TABLE 36.

NON-PROMOTIONS.

Non-promotions of white pupils, by grades, in elementary schools.

NON-PROMOTIONS.	First Grade.			Second Grade.			Third Grade.			Fourth Grade.			Fifth Grade.			Sixth Grade.			Seventh Grade.			Eighth Grade.			Totals by Non-promotions.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
In grade first time.	1,155	928	2,083	669	554	1,223	661	632	1,293	683	551	1,234	550	431	981	382	360	742	186	193	379	79	86	165	4,365	3,735	8,100
Second time or longer........	411	261	672	241	194	435	330	244	574	386	277	663	190	165	355	132	130	262	55	24	79	10	3	13	1,755	1,298	3,053
Totals by grades.	1,566	1,189	2,755	910	748	1,658	991	876	1,867	1,069	828	1,897	740	596	1,336	514	490	1,004	241	217	458	89	89	178	6,120	5,033	11,153

TABLE 37.

Showing the number of white pupils who were promoted to the next higher grade, the number not promoted, and the corresponding rates per cent for each grade of the elementary schools during the scholastic year 1912-13.

GRADES.	Number of pupils.			Per cent of pupils.	
	Promoted.	Not promoted.	Totals.	Promoted.	Not promoted.
First grade	7,285	2,755	10,040	72.7	27.3
Second grade	7,359	1,658	9,017	81.6	18.4
Third grade	6,746	1,867	8,613	78.3	21.7
Fourth grade	5,941	1,897	7,838	75.8	24.2
Fifth grade	4,770	1,336	6,106	78.1	21.9
Sixth grade	3,587	1,004	4,591	78.1	21.9
Seventh grade	2,524	458	2,982	84.7	15.3
Eighth grade	1,988	178	2,166	91.8	8.2
Totals	40,200	11,153	51,353	78.3	21.7

Fig. 6a—Promotions.

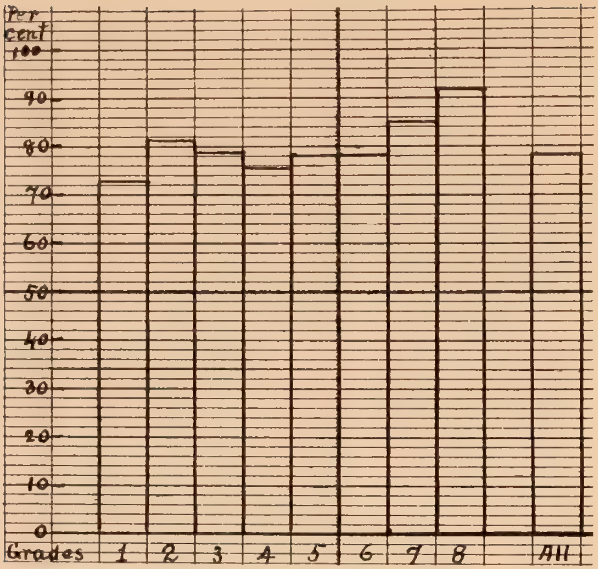

Fig. 6b—Non-Promotions.

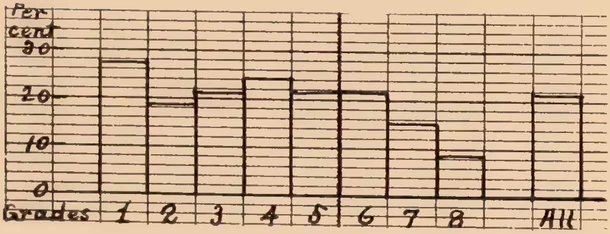

FIG. 6—Graph illustrating table 37. In the upper graph (a) the columns represent, severally, the per cent of white pupils in each grade promoted during the scholastic year 1912-13; in the lower graph (b) the columns similarly represent those not promoted.

Table 38 gathers together the figures from the preceding tables to show the number of children who were repeating the grade during the last year in each separate grade. Some of these children, of course, gained promotion. Others, again, did not, and must continue repeaters next year.

The base for calculating the rate per cent of these pupils is properly the sum total of all who had the right to be considered as available for promotion. In this table we find the first grade as containing the largest percentage of repeaters.

A word of explanation is necessary in order to make clear why it is possible that there should be 3,474 repeaters when there are but 3,157 over time and 2,695 over age. The reason why there should be a larger number of over time pupils than over age has been shown to be the allowance of two years for the normal age for a grade. The number of pupils given as over time, 3,157, does not include any of those who withdrew during the year. The number repeating does include all such pupils who were counted as either promoted or not promoted in the total of 10,040 for this grade. The same explanation is due for each of the other grades. The chart shows that after the first grade, the fourth grade was responsible for the largest percentage of repeating during the past year, followed respectively by the third, second, fifth, sixth, seventh, and eighth.

It is to be regretted that the figures for promotion, non-promotion, etc., cannot be given for the secondary schools. It is hoped that some method of bookkeeping will be devised in these schools whereby this important matter may be so tabulated as to admit of definite study in the future.

TABLE 38.

Showing the number of white pupils the second time or longer (repeating) in the same grade during the scholastic year 1912-13, and the corresponding rates per cent for each grade in the elementary schools.

GRADES.	Maximum number of possible promotions.	In grade second time or longer.							Per cent of pupils repeating.
		Gaining promotion.		Not promoted.		Totals.			
		Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Totals.	
First grade......	10,040	1,511	1,291	411	261	1,922	1,552	3,474	34.7
Second grade....	9,017	1,139	998	241	194	1,380	1,192	2,572	28.5
Third grade.....	8,613	1,011	992	330	244	1,341	1,236	2,577	29.9
Fourth grade....	7,838	947	861	386	277	1,333	1,138	2,471	31.5
Fifth grade......	6,106	657	607	190	165	847	772	1,619	26.5
Sixth grade.....	4,591	381	383	132	130	513	513	1,026	22.3
Seventh grade...	2,982	200	247	55	24	255	271	526	17.6
Eighth grade....	2,166	51	57	10	3	61	60	121	5.6
Totals.........	51,353	5,897	5,436	1,755	1,298	7,652	6,734	14,386	28.0

Fig. 7—Repeating.

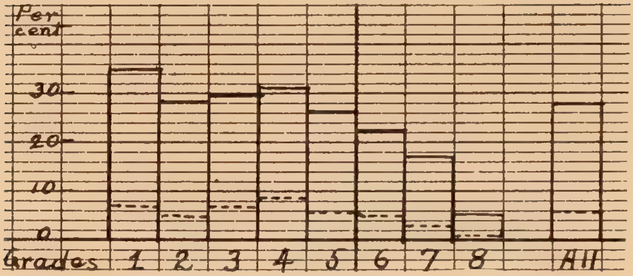

FIG. 7—Graph illustrating table 38. The full height of each column represents, respectively, the per cent of white pupils in each grade this year (1912-13) repeating the grade. The portion of each column above the dotted line represents the per cent of these repeaters who were promoted; below the dotted line, the per cent not promoted.

TABLE 39.

NON-PROMOTIONS BY CAUSES AND GRADES IN WHITE ELEMENTARY SCHOOLS.

Causes.	First Grade.			Second Grade.			Third Grade.			Fourth Grade.			Fifth Grade.			Sixth Grade.			Seventh Grade.			Eighth Grade.			Totals by Causes.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
Irregular attendance.	230	215	445	97	114	211	161	143	304	143	165	308	122	118	240	69	98	167	19	51	70	8	8	16	849	912	1,761
Late entrance, early leaving or both.	58	54	112	62	52	114	61	50	111	57	52	109	24	24	48	27	14	41	8	8	16	3	8	11	300	262	562
Personal illness	134	137	271	60	70	130	52	76	128	45	61	106	37	44	81	12	41	53	9	13	22	5	2	7	354	444	798
Physical defects	64	45	109	32	33	65	38	33	71	29	28	57	15	14	29	9	3	12	4	6	10	2	1	3	193	163	356
Indifference	212	79	291	227	113	340	297	184	481	442	175	617	320	140	460	252	151	403	140	64	204	49	43	92	1,939	949	2,888
Incapacity (mental).	868	659	1,527	432	366	798	382	390	772	353	347	700	222	256	478	145	183	328	61	75	136	22	27	49	2,485	2,303	4,788
Totals by grades.	1,566	1,189	2,755	910	748	1,658	991	876	1,867	1,069	828	1,897	740	596	1,336	514	490	1,004	241	217	458	89	89	178	6,120	5,033	11,153

Table 39 shows the causes for non-promotion stated by the teachers, who were directed to give only the chief cause in each case, disregarding for this table other contributing causes. The late entrance and early leaving in this table mean entrance some time after the beginning of this school year whether previously at school or not, and leaving before the end of the year. Some of our pupils, whole families in fact, about the first of May, go out into the counties of the state to work during the summer on farms, picking berries and gathering fruit and vegetables; others, during the same period, work in the canning establishments. The majority of these pupils do not return to school in the fall until the middle and latter part of October. This is the late entrance and early leaving covered by this table.

Following up the first grade again, it is found that the greatest number fail of promotion because of what is stated to be inability to do the work of the grade (mental incapacity). It is noticeable that this continues to be the chief cause given through each succeeding grade till the sixth grade is reached, in which grade and in the two succeeding grades indifference alone precedes low ability.

Table 39-b has been prepared for comparative study upon the percentage basis. This table as well as the chart illustrating it shows the three main causes for non-promotion to be low ability, indifference, and irregular attendance.

TABLE 39-b.

NON-PROMOTIONS IN WHITE ELEMENTARY SCHOOLS—RATES PER CENT FOR CAUSES.

Per cent of total number of non-promoted pupils in each grade by causes therefor. The rates per cent in this table correspond to the numbers in the columns of totals in the preceding table.

CAUSES.	Rates per cent.								
	First Grade.	Second Grade.	Third Grade.	Fourth Grade.	Fifth Grade.	Sixth Grade.	Seventh Grade.	Eighth Grade.	All Grades.
Irregular attendance...	16.1	12.7	16.3	16.2	18.0	16.6	15.3	9.0	15.8
Late entrance, early leaving............	4.1	6.9	6.0	5.8	3.6	4.1	3.5	6.2	5.0
Personal illness.......	9.8	7.8	6.9	5.6	6.2	5.3	4.8	4.0	7.2
Physical defects.......	4.0	3.9	3.8	3.0	2.2	1.2	2.2	1.7	3.2
Indifference	10.6	20.5	25.7	32.5	34.4	40.2	44.5	51.6	25.9
Incapacity (mental)...	55.4	48.2	41.3	36.9	35.6	32.6	29.7	27.5	42.9
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Fig. 8—Non-Promotions, Causes.

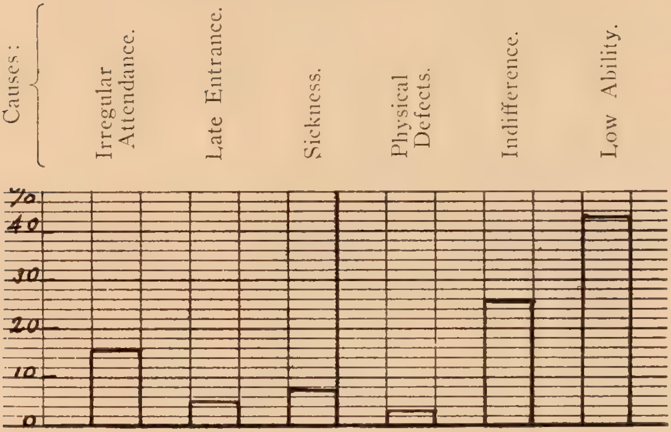

FIG. 8—Graph illustrating table 39-b. Each column respectively represents the rate per cent of non-promoted white pupils in all the elementary grades, reported by teachers as having failed of promotion chiefly by reason of each of the several causes stated. Less potent contributing causes are disregarded in the make-up of this chart.

It is not enough to know why children fail, it is necessary also to know in what studies they fail in order that the course of study may receive proper consideration.

Table 40 gives the number of children failing in each study in each grade. Again following the first grade, we find that, of the 2,755 children who failed, 2,198 failed in reading, the point of greatest difficulty, and 1.846 failed in arithmetic. The totals for all grades show that arithmetic is the chief stumbling block to those who fail. For the 11,153 who failed in all the elementary grades, white schools, arithmetic leads as the most difficult study with 8,716. This figure is significant and calls for earnest study and investigation, especially when we recall that, when measured by the test given last year, Baltimore ranked with the highest among the cities in this country in the ability of the pupils in arithmetic.

Table 40-b has been prepared for a comparative study of the several grades by means of rate per cent. The chart as well as this table shows the prominent place that arithmetic occupies.

TABLE 40.

NON-PROMOTIONS—FAILURES BY STUDIES.

Failures by studies and grades in white elementary schools.

FAILURES BY STUDIES.	First Grade.			Second Grade.			Third Grade.			Fourth Grade.			Fifth Grade.			Sixth Grade.			Seventh Grade.			Eighth Grade.			Totals by Failures.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
Number pupils failing...	1,566	1,189	2,755	910	748	1,658	991	876	1,867	1,069	828	1,897	740	596	1,336	514	490	1,004	241	217	458	89	89	178	6,120	5,033	11,153
Reading..............	1,273	925	2,198	547	357	904	358	252	610	307	190	497	157	97	254	65	36	101	61	32	93	11	11	22	2,779	1,900	4,679
Spelling..............	300	241	541	498	329	827	484	322	806	553	324	877	313	189	502	214	155	369	112	43	155	26	8	34	2,500	1,611	4,111
Composition...........	9	8	17	28	14	42	110	91	201	379	247	626	306	229	535	226	173	399	117	73	190	27	17	44	1,202	852	2,054
Language and grammar.	42	51	93	104	75	179	361	326	687	598	427	1,025	449	364	813	353	300	653	152	127	279	67	54	121	2,126	1,724	3,850
Arithmetic...........	1,000	846	1,846	614	627	1,241	725	743	1,468	842	703	1,545	600	545	1,145	463	453	916	205	203	408	68	79	147	4,517	4,199	8,716
History..............	.....	.....	.....	.....	.....	.....	2	2	4	248	187	435	238	233	471	219	241	460	120	107	227	42	51	93	869	821	1,690
Geography............	.....	.....	.....	.....	.....	.....	7	5	12	342	259	601	372	350	722	244	247	491	118	116	234	37	49	86	1,120	1,026	2,146

TABLE 40-b.

NON-PROMOTIONS IN WHITE ELEMENTARY SCHOOLS—RATES PER CENT OF FAILURES IN STUDIES.

Per cent of total number of non-promoted pupils in each grade failing in the several studies. The rates per cent in this table correspond to the numbers in the column of totals in the preceding table.

STUDIES.	Rates per cent.								
	First Grade.	Second Grade.	Third Grade.	Fourth Grade.	Fifth Grade.	Sixth Grade.	Seventh Grade.	Eighth Grade	All Grades.
Reading	79.8	54.5	32.8	26.0	19.0	10.0	20.3	12.3	41.9
Spelling	19.6	49.9	43.1	46.2	37.1	36.7	33.8	19.1	36.8
Composition	0.06	2.5	10.7	33.0	40.0	39.8	41.5	24.7	18.4
Language and grammar...............	3.4	10.8	36.8	54.0	60.4	65.0	60.9	68.0	34.5
Arithmetic	67.0	74.9	78.6	81.5	85.7	91.1	89.1	82.6	78.0
History	......	.....	0.02	22.9	35.2	45.8	49.6	53.7	15.1
Geography	......	.....	0.06	31.7	54.0	48.9	51.1	48.3	19.2

Fig. 9—Non-Promotions, Failures in Studies.

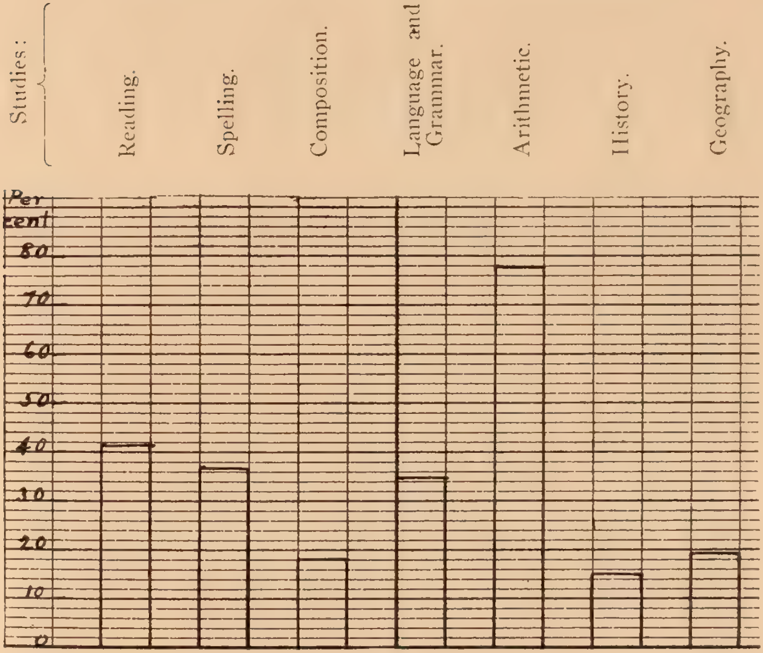

Fig. 9—Graph illustrating table 40-b. Each column respectively represents the rate per cent of non-promoted white pupils in all the elementary grades failing in the several studies.

TABLE 41.

ATTENDANCE.

Distribution of attendance in white elementary schools by number of days and grades.

TIME ATTENDING.	First Grade.			Second Grade.			Third Grade.			Fourth Grade.			Fifth Grade.			Sixth Grade.			Seventh Grade.			Eighth Grade.			Totals by Time.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
Entire year........	15	18	33	32	41	73	26	33	59	36	48	84	45	48	93	27	33	60	47	35	82	28	25	53	256	281	537
At least 180 days....	203	154	357	341	294	635	302	274	576	333	274	607	370	339	709	260	281	541	196	201	397	168	174	342	2,173	1,991	4,164
From 160-179 days..	1,805	1,476	3,281	2,116	1,945	4,061	2,105	2,001	4,106	1918	1,878	3,796	1,675	1,536	3,211	1,229	1,256	2,485	918	974	1,892	678	732	1,410	12,444	11,798	24,242
From 140-159 days..	1,343	1,240	2,583	1,132	1,043	2,175	1,032	1,051	2,083	878	895	1,773	668	710	1,378	477	532	1,009	252	324	576	180	199	379	5,962	5,994	11,956
From 120-139 days..	691	648	1,339	454	453	907	411	450	861	362	368	730	234	264	498	189	193	382	94	107	201	48	56	104	2,483	2,539	5,022
From 100-119 days..	360	338	698	214	216	430	192	212	404	219	201	420	149	171	320	107	116	223	71	61	132	38	40	78	1,350	1,355	2,705
From 80- 99 days..	317	328	645	172	167	339	144	148	292	139	150	289	113	103	216	79	93	172	60	40	100	37	31	68	1,061	1,060	2,121
From 60- 79 days..	278	248	526	119	123	242	107	117	224	102	96	198	86	75	161	66	60	126	34	39	73	20	24	44	812	782	1,594
From 40- 59 days..	165	168	333	72	90	162	94	96	190	86	72	158	53	68	121	45	59	104	43	29	72	19	34	53	577	616	1,193
From 20- 39 days..	172	162	334	85	78	163	75	61	136	74	70	144	60	53	113	40	49	89	23	42	65	24	21	45	553	536	1,089
Less than 20 days...	140	163	303	77	75	152	89	77	166	78	65	143	59	57	116	48	43	91	48	45	93	20	30	50	559	555	1,114
Totals by grades	5,489	4,943	10,432	4,814	4,525	9,339	4,577	4,520	9,097	4,225	4,117	8,342	3,512	3,424	6,936	2,567	2,715	5,282	1,786	1,897	3,683	1,260	1,366	2,626	28,230	27,507	55,737

Table 41 presents the attendance of the children in the various grades. It has been prepared so that comparison can be made with any and every other table to correlate as closely as may be the per cent of irregular attendance with the per cent of failure in any regard. For this purpose it should prove of great value.

The table which closes the white schools is really a comparative study of related data in order to approximate to some extent the co-efficient of school efficiency. For this purpose, it was necessary to use one figure as a base of calculation that should serve for every purpose throughout the entire grade. That which is properly used is the total enrollment of children in the grade for the entire year. Below each number indicating the pupils under the several headings, the italics show the corresponding rate per cent. Starting with the total enrollment, the next column shows the loss during the year. The difference between these two must produce those remaining at the close of the year, which we term "the net roll," but might better be termed the "true register." The number of pupils over age and over time of those who remain at the close of the year follow. These are given as the actual persisting items. The next seven columns show the effects of the work for and during the entire year, the first four columns giving the numbers promoted and the following three the numbers not promoted. The sum of the numbers promoted and non-promoted, of course, give the number of maximum possible promotions; while the sum of those promoted and non-promoted, who have been in the grade for the second time, or longer, gives the total number of repeaters. This is arranged for each grade in order to present in a summarized related form figures which are so closely related as factors of the result produced.

TABLE 42.

EFFICIENCY—WHITE ELEMENTARY SCHOOLS.

Measurement of the school efficiency of white elementary schools as shown by the numbers of pupils accomplishing the work or failing, expressed in the corresponding rate per cent based throughout each grade upon the total enrollment in that grade, thereby giving a uniform basis for comparing normal accomplishment, acceleration, retardation, and repetition within each grade and for comparing one grade with another.

GRADES.		Total enrollment this year.	Withdrawn from this system during year.	As of June 30, 1913.			Number promoted during year.				Number not promoted.			Max. number available for promotion (b+d).	Number repeating grade this year (d+c).
				Net roll or register.	Pupils over age.	Pupils over time.	Less than ten months in grade.	Ten months in grade (normal).	Ingrade second time or longer (a).	Total number promoted (b).	In grade first time.	Ingrade second time or longer (c).	Total not promoted (d).		
First grade....	Number..	10,432	1,023	9,409	2,695	3,157	490	3,993	2,802	7,285	2,083	672	2,755	10,040	3,474
	Per cent..	100.0	9.8	90.2	25.8	30.2	4.7	38.3	26.9	69.8	20.0	6.4	26.4	96.3	33.3
Second grade..	Number..	9,339	622	8,717	3,592	4,191	568	4,654	2,137	7,359	1,223	435	1,658	9,017	2,572
	Per cent..	100.0	6.6	93.4	38.5	44.9	6.1	49.9	22.9	78.8	13.1	4.7	17.8	96.6	27.5
Third grade...	Number..	9,097	595	8,502	4,266	4,959	419	4,324	2,003	6,746	1,293	574	1,867	8,613	2,577
	Per cent..	100.0	6.5	93.5	46.9	54.6	4.6	47.5	22.0	74.2	14.2	6.3	20.5	94.7	28.3
Fourth grade..	Number..	8,342	579	7,763	4,338	5,176	316	3,817	1,808	5,941	1,234	663	1,897	7,838	2,471
	Per cent..	100.0	6.9	93.1	52.0	62.0	3.8	45.7	21.7	71.2	14.8	7.9	22.7	94.0	29.6
Fifth grade....	Number..	6,936	551	6,385	3,634	4,273	268	3,238	1,264	4,770	981	355	1,336	6,106	1,619
	Per cent..	100.0	7.9	92.1	52.4	61.6	3.9	46.7	18.2	68.8	14.1	5.1	19.3	88.1	23.3
Sixth grade....	Number..	5,282	555	4,727	2,316	3,032	184	2,639	764	3,587	742	262	1,004	4,591	1,026
	Per cent..	100.0	10.5	89.5	43.8	57.4	3.5	50.0	14.4	67.9	14.0	5.0	19.0	87.0	19.4
Seventh grade..	Number..	3,683	496	3,187	1,280	1,711	112	1,965	447	2,524	379	79	458	2,982	526
	Per cent..	100.0	13.5	86.5	34.8	46.5	3.0	53.4	12.1	68.5	10.3	2.1	12.4	81.0	14.3
Eighth grade..	Number..	2,626	341	2,285	840	1,066	197	1,683	108	1,988	165	13	178	2,166	121
	Per cent..	100.0	13.0	87.0	32.0	40.6	7.5	64.1	4.1	75.7	6.3	0.5	6.8	82.5	4.6
Totals.......	Number..	55,737	4,762	50,975	22,961	27,565	2,554	26,313	11,333	40,200	8,100	3,053	11,153	51,353	14,386
	Per cent..	100.0	8.5	91.5	41.2	49.5	4.6	47.2	20.3	72.1	14.5	5.5	20.0	92.2	25.8

Colored Schools.

The tables and figures for the colored schools are actually the same in number and kind as those presented for the white schools. The data here presented seem to show the need for more detailed and analytical study than has been given to the data for the white schools. As this problem is one of great interest, the statistician expects to make such a study within the next two months. He will submit it to the board, if desired. in a supplementary report.

TABLE 43.

ENROLLMENT—COLORED PUPILS.

Showing number of colored pupils admitted to the schools by sources whence they came and by grade of schools entered during the scholastic year 1912-13.

Sources.	Number of pupils admitted during scholastic year, 1912-1913.											
	Normal schools.			Secondary schools.			Elementary schools.			All colored schools.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
June-1912 roll	5	27	32	207	498	705	3,696	4,632	8,328	3,908	5,157	9,065
Private schools	......	......	......	......	3	3	44	40	84	44	43	87
Public schools in this state outside of city	......	......	......	3	1	4	85	87	172	88	88	176
Public schools in other states	......	......	......	1	3	4	91	131	222	92	134	226
All other sources	2	25	27	2	......	2	942	1,029	1,971	946	1,054	2,000
Totals	7	52	59	213	505	718	4,858	5,919	10,777	5,078	6,476	11,554

TABLE 44.

Distribution of colored pupils in normal schools by ages and grades, June 30, 1913. Showing also for each grade and for totals by ages the number of pupils under normal age, of normal age, and over normal age (retarded). Normal ages for each grade shown between the heavy horizontal lines in body of table.

AGES.	First Year.			Second Year.			Totals by Ages.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
17-18	.....	2	2	.....	.....	.....	.....	2	2
18-19	.....	11	11	.....	.....	.....	.....	11	11
19-20	.....	10	10	.....	4	4	.....	14	14
20-21	.....	1	1	1	5	6	1	6	7
21-	.....	.....	.....	4	10	14	4	10	14
Totals by grades	.....	24	24	5	19	24	5	43	48
Under normal age	.....	2	2	.....	.....	.....	.....	2	2
Normal	.....	21	21	1	9	10	1	30	31
Over normal age	.....	1	1	4	10	14	4	11	15

TABLE 45.

Distribution of colored pupils in normal schools by years in school and grades, June 30, 1913. Showing also for each grade and for totals, the number who have been in schools less than normal time (accelerated), normal time, and more than normal time (repeating). Normal time shown between the heavy horizontal lines in body of table.

YEARS IN SCHOOL.	First Year.			Second Year.			Totals by Years.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
12-13	.....	6	6	.....	.....	.....	.....	6	6
13-14	.....	18	18	5	11	16	5	29	34
14-15	.....	.....	.....	.....	6	6	.....	6	6
15-16	.....	.....	.....	.....	2	2	.....	2	2
16-	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals by grades	.....	24	24	5	19	24	5	43	48
Less than normal	.....	.....	.....	.....	.....	.....	.....	.....	.....
Normal	.....	24	24	5	17	22	5	41	46
More than normal	.....	.....	.....	.....	2	2	.....	2	2

TABLE 46.

Distribution of colored pupils in normal schools permanently withdrawn from this system during the scholastic year ending June 30, 1913, by causes and grades.

Causes.	First Year.			Second Year.			Totals by Causes.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
To go to work	1	....	1	....	....	....	1	....	1
Non-promotion	....	....	....	....	....	....	....	....	....
Indifference	....	....	....	....	....	....	....	....	....
Physical disability or death	....	....	....	....	....	....	....	....	....
Left city	....	....	....	....	....	....	....	....	....
To private schools	....	....	....	....	....	....	....	....	....
Graduated	....	....	....	....	....	....	....	....	....
Other causes	1	1	2	....	8	8	1	9	10
Totals by grades	2	1	3	....	8	8	2	9	11

TABLE 47.

Distribution of colored pupils in normal schools, permanently withdrawn from this system during the scholastic year ending June 30, 1913, by ages and grades.

BETWEEN AGES.	First Year.			Second Year.			Totals by Years.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
18-19	1	1	2	.....	2	2	1	3	4
19-20	1	.....	1	.....	.....	.....	1	.....	1
20-21	.....	.....	.....	.....	6	6	.....	6	6
21-	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals by grades	2	1	3	.....	8	8	2	9	11
Under normal age	.....	.....	.....	.....	2	2	.....	2	2
Normal	2	1	3	.....	6	6	2	7	9
Over normal age	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE 48.

Distribution of attendance in colored normal schools by number of days and grades.

TIME ATTENDING.	First Year.			Second Year.			Totals by Time.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
Entire year	....	1	1	....	....	....	....	1	1
At least 180 days	....	1	1	1	2	3	1	3	4
From 160-179 days	....	9	9	3	7	10	3	16	19
From 140-159 days	....	3	3	1	....	1	1	3	4
From 120-139 days	....	....	....	....	....	....	....	....	....
From 100-119 days	....	1	1	....	....	....	....	1	1
From 80- 99 days	1	5	6	....	8	8	1	13	14
From 69- 79 days	....	1	1	....	4	4	....	5	5
From 40- 59 days	....	1	1	....	2	2	....	3	3
From 20- 39 days	1	3	4	....	....	....	1	3	4
Less than 20 days	....	....	....	....	4	4	....	4	4
Totals by grades	2	25	27	5	27	32	7	52	59

TABLE 49.

Distribution of colored pupils in secondary schools by ages and grades, June 30, 1913. Showing also for each grade and for totals by ages the number of pupils under normal age, of normal age, and over normal age (retarded). Normal ages for each grade shown between the heavy horizontal lines in body of table.

Ages.	First Year.			Second Year.			Third Year.			Fourth Year.			Totals by Ages.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
12-13	3	1	4	....	....	....	....	....	....	....	....	....	3	1	4
13-14	3	8	11	....	....	....	....	....	....	....	....	....	3	8	11
14-15	22	31	53	2	5	7	....	....	....	....	....	....	24	36	60
15-16	25	43	68	9	17	26	1	1	2	....	2	2	35	63	98
16-17	21	54	75	7	34	41	4	13	17	1	2	3	33	103	136
17-18	16	39	55	16	17	33	4	17	21	2	14	16	38	87	125
18-19	4	13	17	9	18	27	4	24	28	3	11	14	20	66	86
19-20	4	4	8	1	9	10	7	13	20	7	16	23	19	42	61
20-21	2	....	2	....	2	2	....	1	1	3	....	3	5	3	8
21	....	....	....	....	....	....	2	....	2	....	1	1	2	1	3
Totals by grades	100	193	293	44	102	146	22	69	91	16	46	62	182	410	592
Under normal age	6	9	15	2	5	7	1	1	2	1	4	5	10	19	29
Normal	47	74	121	16	51	67	8	30	38	5	25	30	76	180	256
Over normal age	47	110	157	26	46	72	13	38	51	10	17	27	96	211	307

TABLE 50.

Distribution of colored pupils in secondary schools by years in school and grades, June 30, 1913. Showing also for each grade and for totals, the number who have been in schools less than normal time (accelerated), normal time, and more than normal time (repeating). Normal time shown between the heavy horizontal lines in body of table.

Years in School.	First Year.			Second Year.			Third Year.			Fourth Year.			Totals by Years.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Girls.	Boys.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
6- 7	2	4	6	....	....	....	....	....	....	....	....	....	2	4	6
7- 8	7	14	21	2	....	2	....	....	....	....	....	....	9	14	23
8- 9	45	73	118	6	6	12	....	3	3	....	....	....	51	82	133
9-10	40	66	106	16	25	41	2	8	10	1	1	2	59	100	159
10-11	5	29	34	13	45	58	7	18	25	1	6	7	26	98	124
11-12	1	6	7	6	14	20	7	25	32	4	11	15	18	56	74
12-13	....	1	1	1	6	7	3	15	18	9	17	26	13	39	52
13-14	....	....	....	....	5	5	3	....	3	....	9	9	3	14	17
14-15	....	....	....	....	1	1	....	....	....	....	1	1	....	2	2
15-16	....	....	....	....	....	....	....	....	....	1	1	2	1	1	2
Totals by grades	100	193	293	44	102	146	22	69	91	16	46	62	182	410	592
Less than normal	9	18	27	8	6	14	2	11	13	2	7	9	21	42	63
Normal	45	73	118	16	25	41	7	18	25	4	11	15	72	127	199
More than normal	46	102	148	20	71	91	13	40	53	10	28	38	89	241	330

TABLE 51.

Distribution of colored pupils in secondary schools, permanently withdrawn from this system during the scholastic year ending June 30, 1913, by causes and grades.

CAUSES.	First Year.			Second Year.			Third Year.			Fourth Year.			Totals by Causes.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
To go to work	3	3	6	1	1	2	3	1	4	....	....	....	7	5	12
Non-promotion	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Indifference	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Physical disability or death	....	2	2	....	3	3	....	....	....	....	....	....	....	5	5
Left the city	1	1	2	....	....	....	....	....	....	....	1	1	1	2	3
To private schools	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Graduated from high school	....	....	....	....	1	1	....	....	....	3	18	21	3	19	22
Other causes	14	38	52	6	14	20	....	10	10	....	2	2	20	64	84
Totals by grades	18	44	62	7	19	26	3	11	14	3	21	24	31	95	126

TABLE 52.

Causes stated for withdrawal of colored pupils from secondary schools.

CAUSES.	Number of pupils permanently withdrawn.									Per cent of total number withdrawn.
	During scholastic year 1912-13.			During vacation, 1913.			Totals.			
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	
Work	7	5	12	....	....	....	7	5	12	4.6
Lack of success	....	....	....	....	....	....	....	....	....	.....
Indifference	....	....	....	....	....	....	....	....	....	.....
Physical disability or death	....	5	5	....	....	....	....	5	5	1.9
Left the city	1	2	3	....	....	....	1	2	3	1.1
To private schools	....	....	....	....	....	....	....	....	....	.....
Graduated	3	19	22	12	43	55	15	62	77	29.3
Other causes	20	64	84	....	....	....	20	64	84	31.9
Causes unknown	....	....	....	30	52	82	30	52	82	31.2
Totals	31	95	126	42	95	137	73	190	263	.....

TABLE 53.

Distribution of colored pupils in secondary schools, permanently withdrawn from this system during the scholastic year ending June 30, 1913, by ages and grades.

Between Ages.	First Year.			Second Year.			Third Year.			Fourth Year.			Totals by Ages.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
13-14	....	1	1	....	....	....	....	....	....	....	....	....	....	1	1
14-15	....	5	5	....	....	....	....	....	....	....	....	....	....	5	5
15-16	3	4	7	....	2	2	....	....	....	....	....	....	3	6	9
16-17	6	17	23	....	1	1	....	1	1	....	1	1	6	20	26
17-18	3	11	14	3	6	9	1	2	3	....	6	6	7	25	32
18-19	4	5	9	3	6	9	1	5	6	....	7	7	8	23	31
19-20	....	1	1	1	1	2	1	3	4	1	6	7	3	11	14
20-21	2	....	2	....	3	3	....	....	....	1	1	2	3	4	7
21-	....	....	....	....	....	....	....	....	....	1	....	1	1	....	1
Totals by grades	18	44	62	7	19	26	3	11	14	3	21	24	31	95	126
Under normal age	....	1	1	....	....	....	....	....	....	....	1	1	....	2	2
Normal	3	9	12	....	3	3	1	3	4	....	13	13	4	28	32
Over normal age	15	34	49	7	16	23	2	8	10	3	7	10	27	65	92

TABLE 54.

Ages of colored pupils permanently withdrawn from secondary schools.

AGES.	Number of pupils permanently withdrawn.								
	During scholastic year 1912-13.			During vacation, 1913.			Totals.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
13-14	....	1	1	....	....	....	....	1	1
14-15	....	5	5	1	3	4	1	8	9
15-16	3	6	9	4	8	12	7	14	21
16-17	6	20	26	7	11	18	13	31	44
17-18	7	25	32	6	18	24	13	43	56
18-19	8	23	31	6	9	15	14	32	46
19-20	3	11	14	3	1	4	6	12	18
20-21	3	4	7	2	2	4	5	6	11
21	1	....	1	1	....	1	2	....	2
Graduates, ages not given	....	....	....	12	43	55	12	43	55
Totals	31	95	126	42	95	137	73	190	263

TABLE 55.

Withdrawals by Grades.

Grades in secondary colored schools from which pupils were withdrawn.

Grades.	Number of pupils permanently withdrawn.									Per cent of total enrollment in grade.
	During scholastic year 1912-13.			During vacation, 1913.			Totals.			
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	
First year	18	44	62	22	32	54	40	76	116	32.7
Second year	7	19	26	3	15	18	10	34	44	25.6
Third year	3	11	14	4	3	7	7	14	21	20.0
Fourth year	....	2	2	1	2	3	1	4	5	5.8
Graduates	3	19	22	12	43	55	15	62	77	89.5
Totals	31	95	126	42	95	137	73	190	263	36.6 *29.5

*Excluding graduates.

TABLE 56.

Distribution of attendance in colored secondary schools by number of days and grades.

Time Attending.	First Year.			Second Year.			Third Year.			Fourth Year.			Totals by Time.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
Attending entire year.........	19	45	64	11	20	31	5	19	24	6	9	15	41	93	134
At least 180 days............	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
From 160-179 days............	54	111	165	26	61	87	13	46	59	8	33	41	101	251	352
From 140-159 days............	9	27	36	6	14	20	1	3	4	1	3	4	17	47	64
From 120-139 days............	7	11	18	.....	3	3	2	4	6	.....	1	1	9	19	28
From 100-119 days............	2	4	6	2	3	5	1	1	2	1	.....	1	6	8	14
From 80- 99 days...........	3	14	17	2	7	9	1	.....	1	3	19	22	9	40	49
From 60- 79 days............	7	4	11	2	4	6	1	3	4	.....	1	1	10	12	22
From 40- 59 days............	5	7	12	.....	4	4	.....	2	2	.....	1	1	5	14	19
From 20- 39 days............	5	5	10	.....	2	2	1	1	2	.....	.....	.....	6	8	14
Less than 20 days............	7	9	16	2	3	5	.....	1	1	.....	.....	.....	9	13	22
Totals by grades........	118	237	355	51	121	172	25	80	105	19	67	86	213	505	718

TABLE 57.

GRADE—AGE.

Distribution of colored pupils in elementary schools by ages and grades, June 30, 1913. Showing also for each grade and for totals by ages the number of pupils under normal age, of normal age, and over normal age (retarded). Normal ages for each grade shown between the heavy horizontal lines in body of table.

AGES.	First Grade.			Second Grade.			Third Grade.			Fourth Grade.			Fifth Grade.			Sixth Grade.			Seventh Grade.			Eighth Grade.			Totals by Ages.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
5- 6	17	24	41	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	17	24	41
6- 7	210	301	511	4	9	13	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	214	310	524
7- 8	346	346	692	92	111	203	7	10	17	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	445	467	912
8- 9	298	245	543	204	252	456	46	84	130	4	7	11	1	....	1	....	....	....	....	....	....	....	....	....	553	588	1,141
9-10	176	160	336	214	224	438	124	159	283	32	69	101	3	12	15	1	....	1	....	....	....	....	....	....	550	624	1,174
10-11	107	74	181	157	172	329	145	173	318	78	131	209	25	57	82	4	9	13	....	....	....	....	....	....	516	616	1,132
11-12	59	38	97	93	115	208	124	161	285	93	128	221	52	92	144	21	30	51	....	8	8	....	1	1	442	573	1,015
12-13	27	28	55	76	61	137	120	135	255	92	149	241	65	133	198	43	76	119	15	32	47	1	12	13	439	626	1,065
13-14	20	11	31	47	44	91	131	104	235	106	108	214	82	131	213	60	113	173	21	71	92	9	27	36	476	609	1,085
14-15	11	....	11	32	10	42	53	30	83	40	46	86	62	78	140	52	70	122	40	67	107	29	59	88	319	360	679
15-16	5	....	5	9	3	12	23	11	34	21	28	49	30	33	63	28	44	72	24	52	76	23	61	84	163	232	395
16-17	....	....	....	3	....	3	5	3	8	8	5	13	8	6	14	7	12	19	8	22	30	25	48	73	64	96	160
17-18	....	....	....	....	....	....	2	1	3	....	2	2	1	3	4	....	3	3	3	10	13	6	15	21	12	34	46
18-19	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	2	....	1	1	....	3	3	....	6	6
19-20	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....	1	1	....	....	....	1	1	2
Totals by grades.	1,276	1,227	2,503	931	1,001	1,932	780	871	1,651	474	673	1,147	329	545	874	217	359	576	111	264	375	93	226	319	4,211	5,166	9,377
Under normal age.	17	24	41	4	9	13	7	10	17	4	7	11	4	12	16	5	9	14	....	8	8	1	13	14	42	92	134
Normal	556	647	1,203	296	363	659	170	243	413	110	200	310	77	149	226	64	106	170	36	103	139	38	86	124	1,347	1,897	3,244
Over normal age	703	556	1,259	631	629	1,260	603	618	1,221	360	466	826	248	384	632	148	244	392	75	153	228	54	127	181	2,822	3,177	5,999

TABLE 58.

Showing number of colored pupils under age for the grade, of normal age, over age (retarded), and the corresponding rates per cent for each grade of the elementary and the secondary schools, June 30, 1913.

GRADES.	Net roll or register, June 30, 1913.	Number of pupils.			Per cent of pupils.		
		Under age.	Normal age.	Over age.	Under age.	Normal age.	Over age.
Elementary—							
First grade	2,503	41	1,203	1,259	1.6	48.1	50.3
Second grade	1,932	13	659	1,260	0.6	34.2	65.2
Third grade	1,651	17	413	1,221	1.1	25.0	73.9
Fourth grade	1,147	11	310	826	1.0	27.0	72.0
Fifth grade	874	16	226	632	1.8	25.9	72.3
Sixth grade	576	14	170	392	2.4	29.5	68.1
Seventh grade	375	8	139	228	2.1	37.1	60.8
Eighth grade	319	14	124	181	4.4	38.9	56.7
Totals	9,377	134	3,244	5,999	1.4	34.2	64.2
Secondary—							
First year	293	15	121	157	5.1	41.3	53.6
Second year	146	7	67	72	4.8	45.9	49.3
Third year	91	2	38	51	2.2	41.8	56.0
Fourth year	62	5	30	27	8.1	48.4	43.5
Totals	592	29	256	307	4.9	43.3	51.8
Totals	9,969	163	3,500	6,306	1.6	35.2	63.2

Fig. 10a—Normal Age.

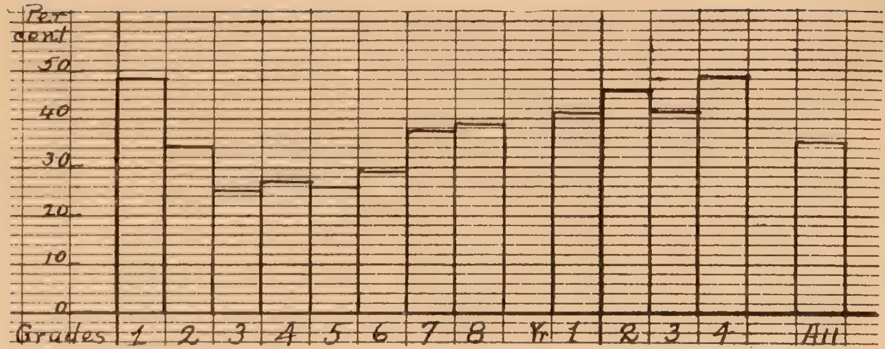

Fig. 10b—Under Age.

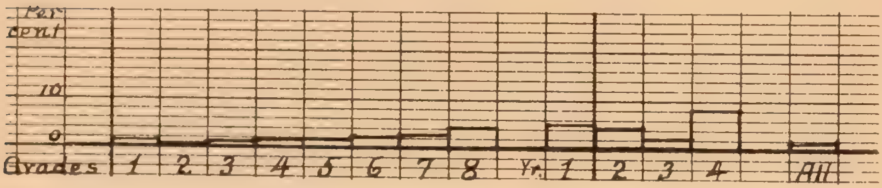

Fig. 10c—Over Age.

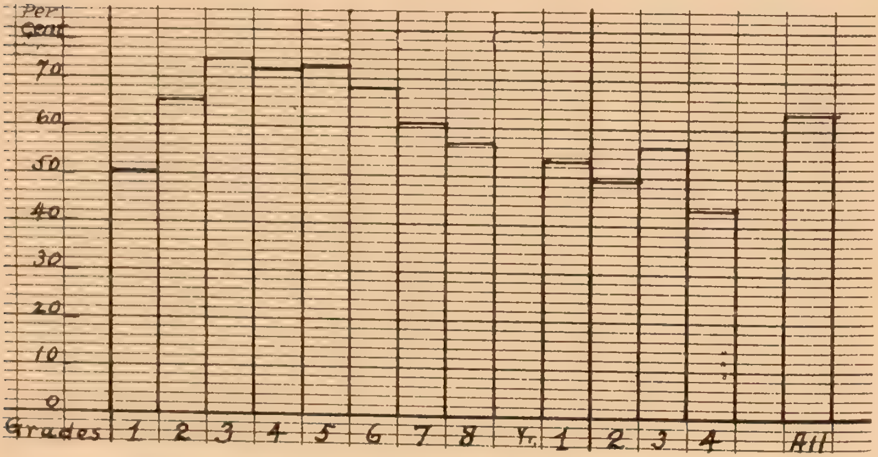

FIG. 10—Graphs illustrating table 58: (a) Each column respectively represents the rate per cent of colored pupils in the several grades of the colored elementary and secondary schools on June, 30, 1913, who were of normal age for the grade; (b) the per cent of under-age pupils; (c) the per cent of over-age pupils.

TABLE 59.

GRADE—TIME.

Distribution of colored pupils in elementary schools by years in school and grades, June 30, 1913. Showing also for each grade and for totals, the number who have been in schools less than normal time (accelerated), normal time, and more than normal time (repeating). Normal time shown between the heavy horizontal lines in body of table.

YEARS IN SCHOOL.	First Grade.			Second Grade.			Third Grade.			Fourth Grade.			Fifth Grade.			Sixth Grade.			Seventh Grade.			Eighth Grade.			Totals by Years.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
0- 1	501	521	1,022	10	9	19	1	2	3	....	....	.....	....	....	.....	....	....	.....	....	....	.....	....	....	.....	512	532	1,044
1- 2	418	498	916	181	210	391	19	14	33	1	2	3	....	1	1	....	....	.....	....	....	.....	1	....	1	620	725	1,345
2- 3	224	175	399	370	439	809	94	133	227	3	36	39	....	2	2	....	3	3	....	....	.....	1	....	1	692	788	1,480
3- 4	93	27	120	194	221	415	246	326	572	54	133	187	13	28	41	2	7	9	....	....	.....	....	1	1	602	743	1,345
4- 5	14	5	19	111	85	196	168	222	390	146	185	331	31	85	116	5	15	20	1	2	3	....	....	.....	476	599	1,075
5- 6	24	1	25	46	32	78	122	114	236	149	175	324	106	178	284	70	121	191	9	16	25	1	4	5	527	641	1,168
6- 7	2	....	2	12	4	16	64	39	103	61	90	151	94	133	227	62	111	173	29	84	113	8	29	37	332	490	822
7- 8	....	....	.....	4	1	5	41	11	52	34	37	71	42	80	122	52	72	124	30	76	106	34	78	112	237	355	592
8- 9	....	....	.....	1	.....	1	19	6	25	17	11	28	27	26	53	22	20	42	25	60	85	27	72	99	138	195	333
9-10	....	....	.....	2	.....	2	4	3	7	7	4	11	10	8	18	3	8	11	8	18	26	15	36	51	49	77	126
10-11	....	....	.....	.....	.....	.....	2	1	3	2	....	2	5	3	8	1	2	3	6	5	11	6	2	8	22	13	35
11-12	....	....	.....	.....	.....	.....	....	....	.....	....	....	.....	1	....	1	....	....	.....	3	2	5	....	4	4	4	6	10
12-13	....	....	.....	.....	.....	.....	....	....	.....	....	....	.....	....	1	1	....	....	.....	....	1	1	....	....	.....	.....	2	2
Totals by grades.	1,276	1,227	2,503	931	1,001	1,932	780	871	1,651	474	673	1,147	329	545	874	217	359	576	111	264	375	93	226	319	4,211	5,166	9,377
Less than normal.	....	....	....	10	9	19	20	16	36	4	38	42	13	31	44	7	25	32	10	18	28	11	34	45	75	171	246
Normal	501	521	1,022	181	210	391	94	133	227	54	133	187	31	85	116	70	121	191	29	84	113	34	78	112	994	1,365	2,359
More than normal.	775	706	1,481	740	782	1,522	666	722	1,388	416	502	918	285	429	714	140	213	353	72	162	234	48	114	162	3,142	3,630	6,772

TABLE 60.

Showing the number of colored pupils who have been at school less than the normal number of years according to the grade attained, the number similarly normal in time, the number over time, and the corresponding rates per cent for each grade of the elementary and the secondary schools, June 30, 1913.

GRADES.	Net roll or register, June 30, 1913.	Number of pupils.			Per cent of pupils.		
		Under time.	Normal time.	Over time.	Under time.	Normal time.	Over time.
Elementary—							
First grade	2,503	0	1,022	1,481	0.0	40.8	59.2
Second grade	1,932	19	391	1,522	1.0	20.2	78.8
Third grade	1,651	36	227	1,388	2.2	13.7	84.1
Fourth grade	1,147	42	187	918	3.7	16.3	80.0
Fifth grade	874	44	116	714	5.0	13.3	81.7
Sixth grade	576	32	191	353	5.6	33.2	61.2
Seventh grade	375	28	113	234	7.5	30.1	62.4
Eighth grade	319	45	112	162	14.1	35.5	50.8
Totals	9,377	246	2.359	6,772	2.6	25.2	72.2
Secondary—							
First year	293	27	118	148	9.2	40.3	50.5
Second year	146	14	41	91	9.6	28.1	62.3
Third year	91	13	25	53	14.3	27.5	58.2
Fourth year	62	9	15	38	14.5	24.2	61.3
Totals	592	63	199	330	10.6	33.6	55.8
Totals	9,969	309	2,558	7,102	3.1	25.6	71.3

Fig. 11a—Normal Time.

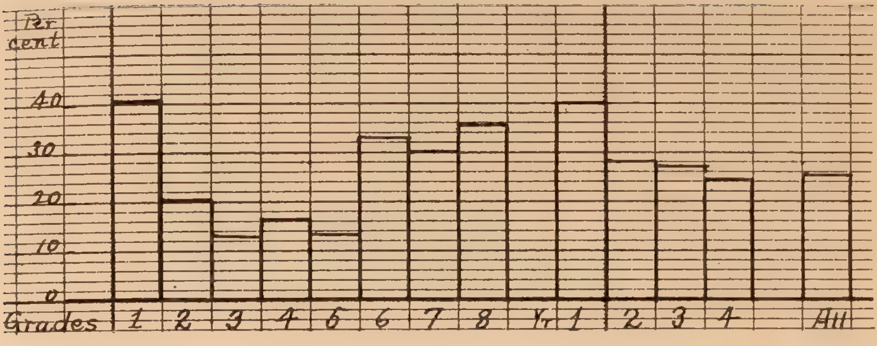

Fig. 11b—Under Time.

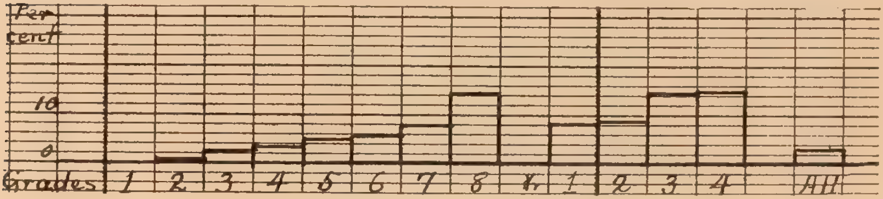

Fig. 11c—Over Time.

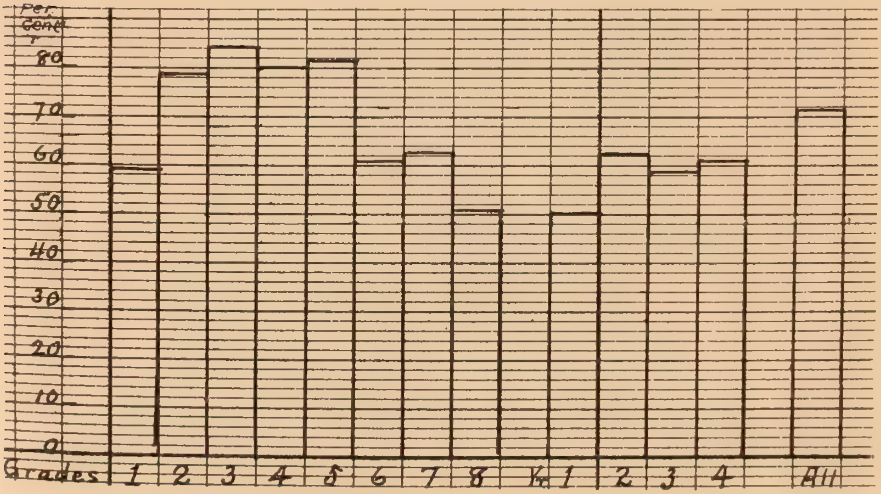

FIG. 11—Graphs illustrating table 60: (a) Each column respectively represents the rate per cent of colored pupils in the several grades of the colored elementary and secondary schools on June 30, 1913, who have been at school the number of years corresponding to the grade attained (normal time); (b) the per cent of under-time pupils; (c) the per cent of over-time pupils.

TABLE 61.

WITHDRAWALS BY CAUSES.

Distribution of colored pupils in elementary schools permanently withdrawn from this system during the scholastic year ending June 30, 1913, by causes and grades.

Causes.	First Grade.			Second Grade.			Third Grade.			Fourth Grade.			Fifth Grade.			Sixth Grade.			Seventh Grade.			Eighth Grade.			Totals by Causes.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
To go to work	4	4	8	6	14	20	23	23	46	41	29	70	35	46	81	27	28	55	6	24	30	6	17	23	148	185	333
Non-promotions	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Indifference	1	2	3	1	....	1	1	....	1	....	....	....	1	1	2	....	....	....	....	....	....	....	....	....	4	3	7
Physical disability or death	21	22	43	4	16	20	7	18	25	5	7	12	5	11	16	4	6	10	2	6	8	1	2	3	49	88	137
Left the city	71	79	150	43	44	87	46	36	82	26	36	62	11	24	35	11	12	23	....	9	9	1	3	4	209	243	452
To private schools	5	8	13	10	3	13	7	5	12	3	1	4	1	....	1	2	3	5	....	....	....	....	2	2	28	22	50
Graduated from high school	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Other causes	26	31	57	24	12	36	4	9	13	7	13	20	5	8	13	2	8	10	....	1	1	....	1	1	68	83	151
Totals by grades	128	146	274	88	89	177	88	91	179	82	86	168	58	90	148	46	57	103	8	40	48	8	25	33	506	624	1,130

TABLE 62.

Causes stated for withdrawal of colored pupils from elementary schools.

CAUSES.	Number of pupils permanently withdrawn.									Per cent of total number withdrawn.
	During scholastic year 1912-1913.			During vacation 1913.			Totals.			
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	
Work	148	185	333	129	109	238	277	294	571	33.5
Lack of success	...	...	.....	...	...	.....	...	...	.....	....
Indifference	4	3	7	5	1	6	9	4	13	0.8
Physical disability or death	49	88	137	12	18	30	61	106	167	9.8
Left the city	209	243	452	84	100	184	293	343	636	37.3
To private schools	28	22	50	9	14	23	37	36	73	4.3
Other causes	68	83	151	36	57	93	104	140	244	14.3
Totals	506	624	1,130	275	299	574	781	923	1,704	Boys, 45.8 Girls, 54.2

Fig. 12—Withdrawals, Causes.

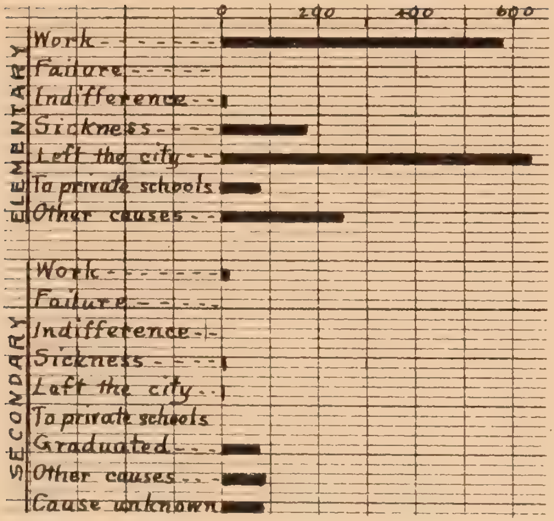

FIG. 12. Graphs illustrating tables 62 and 52. The number of pupils withdrawn from the colored elementary and secondary schools for each of the causes given.

TABLE 63.

WITHDRAWALS BY AGES.

Distribution of colored pupils in elementary schools, permanently withdrawn from this system during the scholastic year ending June 30, 1913, by ages and grades.

BETWEEN AGES.	First Grade.			Second Grade.			Third Grade.			Fourth Grade.			Fifth Grade.			Sixth Grade.			Seventh Grade.			Eighth Grade.			Totals by Ages.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
5- 7	22	40	62	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	22	40	62
7- 8	34	28	62	4	6	10	1	1	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	39	35	74
8- 9	31	21	52	11	12	23	2	5	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	44	38	82
9-10	15	18	33	18	18	36	9	5	14	....	3	3	....	....	....	....	....	....	....	....	....	....	....	....	42	44	86
10-11	11	16	27	12	9	21	15	10	25	1	3	4	2	3	5	....	....	....	....	....	....	....	....	....	41	41	82
11-12	4	8	12	14	13	27	8	11	19	6	8	14	1	7	8	1	....	1	....	....	....	....	....	....	34	47	81
12-13	5	9	14	9	11	20	12	14	26	18	12	30	4	5	9	5	2	7	....	....	....	....	....	....	53	53	106
13-14	2	3	5	8	13	21	17	19	36	14	15	29	8	22	30	8	7	15	....	....	....	....	2	2	57	81	138
14-15	1	3	4	8	5	13	13	17	30	21	26	47	18	19	37	10	18	28	2	11	13	....	3	3	73	102	175
15-16	....	....	....	2	2	4	8	6	14	11	14	25	14	20	34	12	17	29	3	13	16	1	3	4	51	75	126
16-17	3	....	3	2	....	2	2	2	4	10	4	14	11	11	22	7	10	17	1	8	9	4	9	13	40	44	84
17-18	....	....	....	....	....	....	1	1	2	1	1	2	....	3	3	3	2	5	1	6	7	1	5	6	7	18	25
18-19	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	1	2	3	2	3	5	3	6	9
Totals by grades	128	146	274	88	89	177	88	91	179	82	86	168	58	90	148	46	57	103	8	40	48	8	25	33	506	624	1,130
Under normal age	....	....	....	....	....	....	1	1	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	2
Normal	56	68	124	15	18	33	11	10	21	1	6	7	3	10	13	6	2	8	....	....	....	....	5	5	92	119	211
Over normal age	72	78	150	73	71	144	76	80	156	81	80	161	55	80	135	40	55	95	8	40	48	8	20	28	413	504	917

TABLE 64.

Ages of colored pupils permanently withdrawn from elementary schools.

Ages.	Number of pupils permanently withdrawn.								
	Scholastic year 1912-1913			Vacation 1913.			Totals.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
5 to 7	22	40	62	4	5	9	26	45	71
7 to 8	39	35	74	13	20	33	52	55	107
8 to 9	44	38	82	14	18	32	58	56	114
9 to 10	42	44	86	13	15	28	55	59	114
10 to 11	41	41	82	25	21	46	66	62	128
11 to 12	34	47	81	16	24	40	50	71	121
12 to 13	53	53	106	26	24	50	79	77	156
13 to 14	57	81	138	30	38	68	87	119	206
14 to 15	73	102	175	43	43	86	116	145	261
15 to 16	51	75	126	45	49	94	96	124	220
16 to 17	40	44	84	37	28	65	77	72	149
17 to 18	7	18	25	8	10	18	15	28	43
18 to 19	3	6	9	1	3	4	4	9	13
19 to 20	.....	.....	.....	.....	1	1	.....	1	1
Totals	506	624	1,130	275	299	574	781	923	1,704

Fig. 13—Withdrawals, Ages.

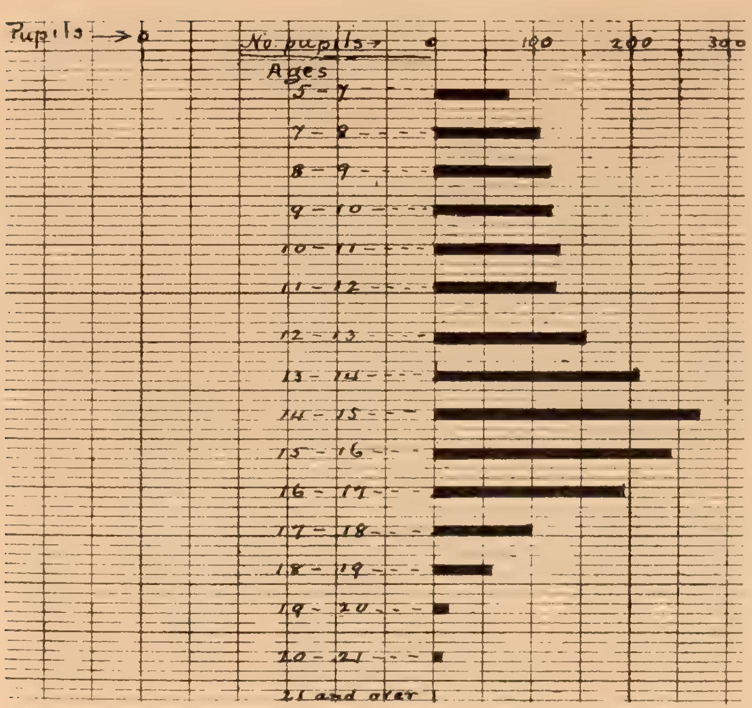

FIG. 13—Graph illustrating tables 64 and 54 combined. The number of pupils withdrawn from the colored elementary and secondary schools during the year, by ages.

TABLE 65.

WITHDRAWALS BY GRADES.

Grades in colored elementary schools from which pupils were withdrawn.

GRADES.	During scholastic year 1912-1913			During vacation 1913.			Totals.			Per cent of total enrollment in grade.
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	
First..............	128	146	274	43	36	79	171	182	353	12.7
Second...........	88	89	177	40	33	73	128	122	250	11.8
Third.............	88	91	179	53	61	114	141	152	293	16.0
Fourth............	82	86	168	47	41	88	129	127	256	19.5
Fifth.............	58	90	148	37	51	88	95	141	236	23.1
Sixth.............	46	57	103	31	32	63	77	89	166	24.4
Seventh...........	8	40	48	11	22	33	19	62	81	19.1
Eighth............	8	25	33	13	23	36	21	48	69	19.6
Totals........	506	624	1,130	275	299	574	781	923	1,704	16.2

Fig. 14—Withdrawals, Grades.

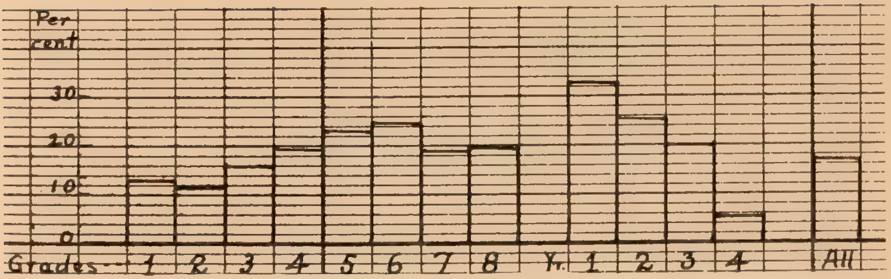

FIG. 14—Graph illustrating tables 65 and 55. The several columns represent the per cent of the total enrollment in the respective grades in the colored elementary and secondary schools for the year 1912-13, who were withdrawn, excluding the number graduated from secondary schools.

TABLE 66.

PROMOTIONS.

Promotions of colored pupils, by grades, in elementary schools.

PROMOTIONS.	First Grade.			Second Grade.			Third Grade.			Fourth Grade.			Fifth Grade.			Sixth Grade.			Seventh Grade.			Eighth Grade.			Totals by Promotions.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
In grade first time....	352	420	772	330	454	784	285	436	721	190	356	546	152	317	469	118	280	398	87	226	313	71	148	219	1,585	2,637	4,222
Second time or longer..	382	324	706	276	331	607	243	243	486	100	160	260	86	146	232	26	38	64	16	28	44	4	19	23	1,133	1,289	2,422
Totals by grades....	734	744	1,478	606	785	1,391	528	679	1,207	290	516	806	238	463	701	144	318	462	103	254	357	75	167	242	2,718	3,926	6,644

TABLE 66-b.

Promotions of colored pupils with time in accomplishing grade work, by grades, in elementary schools.

TIME IN GRADES.	First Grade.			Second Grade.			Third Grade.			Fourth Grade.			Fifth Grade.			Sixth Grade.			Seventh Grade.			Eighth Grade.			Totals by Time.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
Less than ten months.	36	39	75	71	44	115	33	86	119	42	50	92	18	25	43	18	52	70	11	23	34	5	20	25	234	339	573
Ten months..........	316	381	697	259	410	669	252	350	602	148	306	454	134	292	426	100	228	328	76	203	279	66	128	194	1,351	2,298	3,649
More than ten months..	382	324	706	276	331	607	243	243	486	100	160	260	86	146	232	26	38	64	16	28	44	4	19	23	1,133	1,289	2,422
Totals by grades....	734	744	1,478	606	785	1,391	528	679	1,207	290	516	806	238	463	701	144	318	462	103	254	357	75	167	242	2,718	3,926	6,644

TABLE 67.

NON-PROMOTIONS.

Promotions of colored pupils, time in accomplishing grade work, and non-promotions by grades, in elementary schools.

NON-PROMOTIONS.	First Grade.			Second Grade.			Third Grade.			Fourth Grade.			Fifth Grade.			Sixth Grade.			Seventh Grade.			Eighth Grade.			Totals by Non-promotions.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals
In grade first time....	226	263	489	175	107	282	142	169	311	93	109	202	37	37	74	26	26	52	5	9	14	8	17	25	712	737	1,449
Second time or longer...	286	228	514	160	103	263	114	90	204	63	41	104	46	55	101	9	20	29	4	5	9	2	5	7	684	547	1,231
Totals by grades....	512	491	1,003	335	210	545	256	259	515	156	150	306	83	92	175	35	46	81	9	14	23	10	22	32	1,396	1,284	2,680

TABLE 68.

Showing the number of colored pupils who were promoted to the next higher grade, the number not promoted, and the corresponding rates per cent for each grade of the elementary schools during the scholastic year 1912-13.

Grades.	Number of pupils.			Per cent of pupils.	
	Promoted.	Not promoted.	Totals.	Promoted.	Not promoted.
First grade	1,478	1,003	2,481	59.6	40.4
Second grade	1,391	545	1,936	71.8	28.2
Third grade	1,207	515	1,722	70.1	29.9
Fourth grade	806	306	1,112	72.5	27.5
Fifth grade	701	175	876	80.0	20.0
Sixth grade	462	81	543	85.1	14.9
Seventh grade	357	23	380	94.0	6.0
Eighth grade	242	32	274	88.3	11.7
Totals	6,644	2,680	9,324	71.3	28.7

Fig. 15a—Promotions.

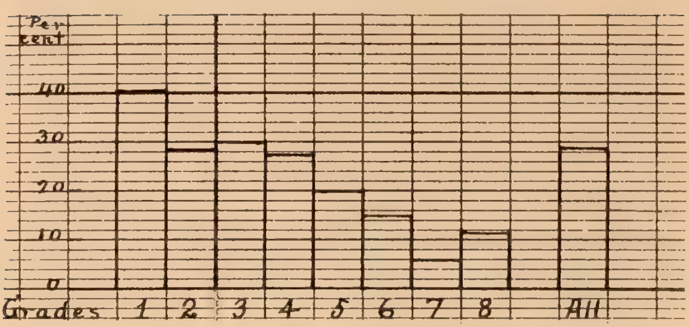

Fig. 15b—Non-Promotions.

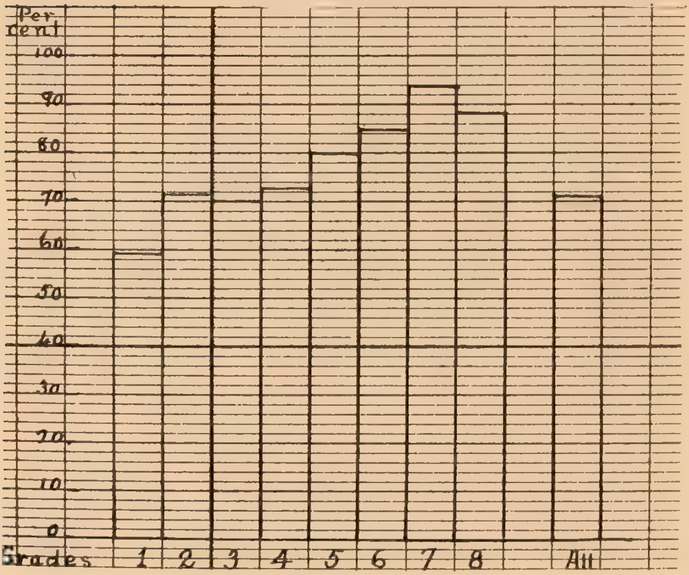

FIG. 15—Graph illustrating table 68. In the upper figure (a) the columns represent, severally, the per cent of colored pupils in each grade who were promoted during the scholastic year 1912-13. In the lower figure (b) the columns similarly represent those not promoted.

TABLE 69.

NON-PROMOTIONS—REPEATING.

Showing the number of colored pupils the second time or longer (repeating) in the same grade during the scholastic year 1912-13, and the corresponding rates per cent for each grade in the elementary schools.

GRADES.	Maximum number of possible promotions.	In grade second time or longer.							Per cent of pupils repeating.
		Gaining promotion.		Not promoted		Totals.			
		Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Totals.	
First grade	2,481	382	324	286	228	668	552	1,220	49.1
Second grade	1,936	276	331	160	103	436	434	870	44.9
Third grade	1,722	243	243	114	90	357	333	690	40.0
Fourth grade	1,112	100	160	63	41	163	201	364	32.7
Fifth grade	876	86	146	46	55	132	201	333	38.0
Sixth grade	543	26	38	9	20	35	58	93	17.1
Seventh grade	380	16	28	4	5	20	33	53	13.9
Eighth grade	274	4	19	2	5	6	24	30	10.9
Totals	9,324	1,133	1,289	684	547	1,817	1,836	3.653	39.1

Fig. 16—Repeating.

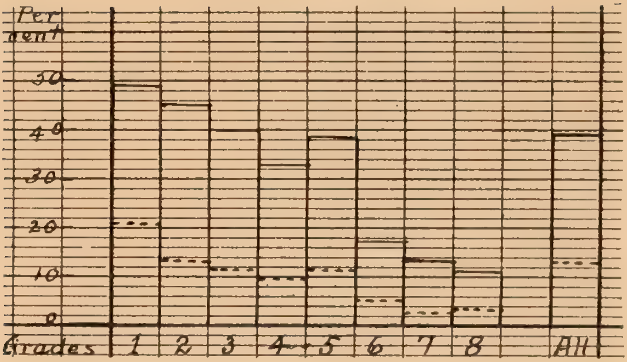

FIG. 16—Graph illustrating table 69. The full height of each column represents, respectively, the per cent of pupils in each grade of the colored elementary schools this year (1912-13) repeating the grade. The portion above the dotted line represents the per cent of these repeaters who were promoted; below the dotted line, the per cent not promoted.

TABLE 70.

Non-promotions by causes and grades in colored elementary schools.

Causes.	First Grade.			Second Grade.			Third Grade.			Fourth Grade.			Fifth Grade.			Sixth Grade.			Seventh Grade.			Eighth Grade.			Totals by Causes.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
Irregular attendance....	253	231	484	144	108	252	123	97	220	70	73	143	37	43	80	17	14	31	2	2	4	2	4	6	648	572	1,220
Late entrance, early leaving, or both.....	26	36	62	15	11	26	10	17	27	2	1	3	3	8	11	....	1	1	3	2	5	....	....	.....	59	76	135
Personal illness.......	46	55	101	8	9	17	9	22	31	12	5	17	2	4	6	1	3	4	1	1	2	....	2	2	79	101	180
Physical defects.......	21	17	38	18	8	26	4	6	10	....	2	2	....	2	2	1	1	2	....	....	.....	....	....	.....	44	36	80
Indifference...........	75	56	131	56	12	68	68	41	109	55	30	85	28	26	54	12	18	30	1	2	3	7	7	14	302	192	494
Incapacity (mental)....	91	96	187	94	62	156	42	76	118	17	39	56	13	9	22	4	9	13	2	7	9	1	9	10	264	307	571
Totals by grades....	512	491	1,003	335	210	545	256	259	515	156	150	306	83	92	175	35	46	81	9	14	23	10	22	32	1,396	1,284	2,680

TABLE 70-b.

NON-PROMOTIONS IN COLORED ELEMENTARY SCHOOLS—RATES PER CENT FOR CAUSES.

Per cent of total number of non-promoted pupils in each grade by causes therefor. The rates per cent in this table correspond to the numbers in the columns of totals in the preceding table.

CAUSES.	Rates per cent.								
	First Grade.	Second Grade.	Third Grade.	Fourth Grade.	Fifth Grade.	Sixth Grade.	Seventh Grade.	Eighth Grade.	All Grades.
Irregular attendance...	48.3	46.4	42.8	46.7	45.7	38.3	17.4	18.7	45.6
Late entrance, early leaving............	6.2	4.7	5.2	1.0	6.3	1.2	21.7	0.0	5.0
Personal illness.......	10.0	3.1	6.0	5.5	3.4	4.9	8.7	6.3	6.7
Physical defects.......	3.8	4.7	1.9	0.7	1.1	2.5	0.0	0.0	3.0
Indifference	13.1	12.5	21.2	27.8	30.9	37.0	13.0	43.7	18.4
Incapacity (mental)...	18.6	28.6	22.9	18.3	12.6	16.1	39.2	31.3	21.3
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Fig. 17—Non-Promotions, Causes.

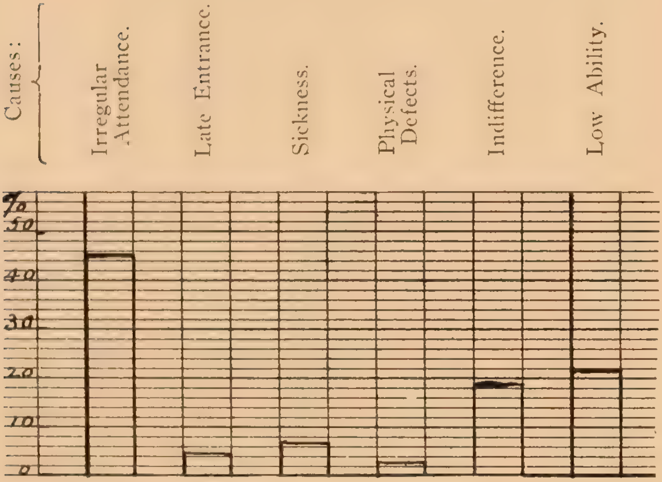

FIG. 17—Graph illustrating table 70-b. Each column respectively represents the rate per cent of non-promoted colored pupils in all the elementary grades, reported by teachers as having failed of promotion chiefly by reason of each of the several causes stated. Less potent contributing causes are disregarded in the make-up of the chart.

TABLE 71.

Failures by studies and grades in colored elementary schools.

Failures by Studies.	First Grade.			Second Grade.			Third Grade.			Fourth Grade.			Fifth Grade.			Sixth Grade.			Seventh Grade.			Eighth Grade.			Totals by Failures.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
Number pupils failing..	512	491	1,003	335	210	545	256	259	515	156	150	306	83	92	175	35	46	81	9	14	23	10	22	32	1,396	1,284	2,680
Reading.............	450	463	913	275	170	445	135	88	223	74	56	130	20	21	41	6	5	11	1	2	3	1	3	4	962	808	1,770
Spelling.............	24	10	34	76	61	137	119	84	203	64	52	116	20	19	39	16	5	21	3	6	9	2	8	10	324	245	569
Composition..........	11	5	16	21	23	44	15	26	41	27	35	62	32	23	55	19	18	37	1	3	4	4	9	13	130	142	272
Language and grammar.	15	16	31	45	26	71	84	71	155	51	59	110	55	59	114	18	15	33	1	8	9	10	17	27	279	271	550
Arithmetic...........	182	229	411	224	134	358	140	167	307	98	134	232	58	90	148	28	23	51	3	10	13	8	16	24	741	803	1,544
History..............	....	....	....	....	....	....	5	7	12	15	29	44	14	25	39	10	25	35	1	4	5	7	16	23	52	106	158
Geography............	....	....	....	....	....	....	7	8	15	19	21	40	12	19	31	11	11	22	1	4	5	3	5	8	53	68	121

TABLE 71-b.

NON-PROMOTIONS IN COLORED ELEMENTARY SCHOOLS—RATES PER CENT OF FAILURES IN STUDIES.

Per cent of total number of non-promoted pupils in each grade failing in the several studies. The rates per cent in this table correspond to the numbers in the columns of totals in the preceding table.

STUDIES.	Rates per cent.								
	First Grade.	Second Grade.	Third Grade.	Fourth Grade.	Fifth Grade.	Sixth Grade.	Seventh Grade.	Eighth Grade.	All Grades.
Reading	91.0	81.7	43.3	42.5	23.4	13.6	13.0	12.5	66.1
Spelling	3.4	25.1	39.4	37.9	22.3	25.9	39.1	31.2	21.2
Composition	1.6	8.1	8.0	20.3	31.4	45.7	17.4	40.6	10.1
Language and grammar	3.1	13.0	30.1	35.9	65.1	40.7	39.1	84.4	20.5
Arithmetic	40.9	65.7	59.6	75.8	84.6	63.0	56.5	75.0	57.6
History	.....	.....	2.3	14.4	22.3	43.2	21.7	71.9	*14.1
Geography	.....	.....	2.9	13.1	17.7	27.2	21.7	25.0	*10.8

*Rates per cent based on 1,122, the total number of pupils taking these studies, the first and second grades being omitted.

Fig. 18—Non-Promotions, Failures in Studies.

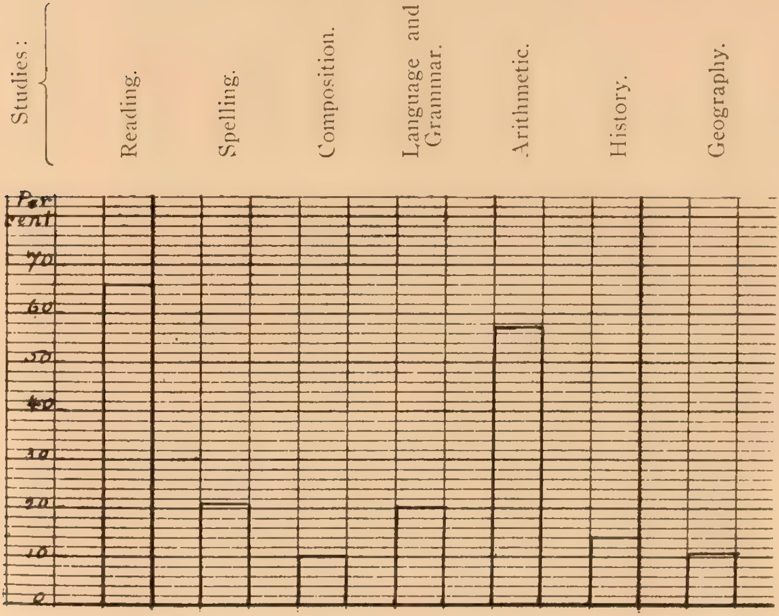

FIG. 18—Graph illustrating table 71-b. Each column respectively represents the rate per cent of non-promoted colored pupils in all the elementary grades failing in the several studies.

TABLE 72.

ATTENDANCE.

Distribution of attendance in colored elementary schools by number of days and grades.

TIME ATTENDING.	First Grade.			Second Grade.			Third Grade.			Fourth Grade.			Fifth Grade.			Sixth Grade.			Seventh Grade.			Eighth Grade.			Totals by Time.		
	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.	Boys.	Girls.	Totals.
Entire year........	4	3	7	2	5	7	....	2	2	2	7	9	2	10	12	9	7	16	4	4	8	16	20	36	39	58	97
At least 180 days..	36	39	75	41	52	93	22	29	51	18	41	59	30	45	75	20	41	61	23	65	88	21	56	77	211	368	579
From 160-179 days.	193	182	375	250	306	556	210	245	455	166	241	407	95	202	297	93	177	270	52	120	172	38	83	121	1,097	1.556	2,653
From 140-159 days.	224	246	470	189	224	413	197	210	407	103	157	260	84	126	210	41	67	108	25	52	77	9	43	52	872	1,125	1,997
From 120-139 days.	239	203	442	166	153	319	123	149	272	56	72	128	50	91	141	20	41	61	4	22	26	5	13	18	663	744	1.407
From 100-119 days.	173	169	342	93	124	217	81	115	196	48	79	127	32	49	81	24	9	33	1	6	7	2	5	7	454	556	1.010
From 80- 99 days.	153	160	313	106	75	181	69	57	126	59	65	124	30	32	62	16	21	37	2	8	10	....	8	8	435	426	861
From 60- 79 days.	135	112	247	54	63	117	57	47	104	32	32	64	16	19	35	14	20	34	2	7	9	3	4	7	313	304	617
From 40- 59 days.	95	86	181	52	41	93	41	46	87	18	23	41	15	21	36	9	11	20	4	7	11	4	6	10	238	241	479
From 20- 39 days.	63	84	147	26	24	50	26	23	49	26	22	48	13	14	27	7	13	20	1	8	9	1	7	8	163	195	358
Less than 20 days..	89	89	178	40	23	63	42	39	81	28	20	48	20	26	46	10	9	19	1	5	6	2	6	8	232	217	449
Totals by grades.	1,404	1,373	2,777	1,019	1,090	2,109	868	962	1,830	556	759	1.315	387	635	1,022	263	416	679	119	304	423	101	251	352	4,717	5.790	10.507

TABLE 73.

EFFICIENCY—COLORED ELEMENTARY SCHOOLS.

Measurement of the school efficiency of colored elementary schools as shown by the numbers of pupils accomplishing the work or failing, expressed in the corresponding rates per cent based throughout each grade upon the total enrollment in that grade, thereby giving a uniform basis for comparing normal accomplishment, acceleration, retardation, and repetition within each grade and for comparing one grade with another.

GRADES.		Total enrollment this year.	Withdrawn from this system during year.	As of June 30, 1913.			Number promoted during year.				Number not promoted.			Max. number available for promotion (b+d).	Number repeating grade this year (a+c).
				Net roll or register.	Pupils over age.	Pupils over time.	Less than ten months in grade.	Ten months in grade (normal).	In grade second time or longer (a).	Total number promoted (b).	In grade first time.	In grade second time or longer (c).	Total not promoted (d).		
First grade....	Number..	2,777	274	2,503	1,259	1,481	75	697	706	1,478	489	514	1,003	2,481	1,220
	Per cent..	*100.0*	*9.9*	*90.1*	*45.3*	*53.3*	*2.7*	*25.1*	*25.4*	*53.2*	*17.6*	*18.5*	*36.1*	*89.4*	*43.9*
Second grade..	Number..	2,109	177	1,932	1,260	1,522	115	669	607	1,391	282	263	545	1,936	870
	Per cent..	*100.0*	*8.4*	*91.6*	*59.8*	*72.2*	*5.5*	*31.7*	*28.8*	*66.0*	*13.4*	*12.5*	*25.8*	*91.8*	*41.2*
Third grade...	Number..	1,830	179	1,651	1,221	1,388	119	602	486	1,207	311	204	515	1,722	690
	Per cent..	*100.0*	*9.8*	*90.2*	*66.7*	*75.8*	*6.5*	*32.9*	*26.6*	*66.0*	*17.0*	*11.1*	*28.1*	*94.1*	*37.7*
Fourth grade..	Number..	1,315	168	1,147	826	918	92	454	260	806	202	104	306	1,112	364
	Per cent..	*100.0*	*12.8*	*87.2*	*62.8*	*69.8*	*7.0*	*34.5*	*19.8*	*61.3*	*15.4*	*7.9*	*23.3*	*84.6*	*27.7*
Fifth grade....	Number..	1,022	148	874	632	714	43	426	232	701	74	101	175	876	333
	Per cent..	*100.0*	*14.5*	*85.5*	*61.8*	*69.8*	*4.2*	*41.7*	*22.7*	*68.6*	*7.2*	*9.9*	*17.1*	*85.7*	*32.6*
Sixth grade...	Number..	679	103	576	392	353	70	328	64	462	52	29	81	543	93
	Per cent..	*100.0*	*15.2*	*84.8*	*57.7*	*52.0*	*10.3*	*48.3*	*9.4*	*68.0*	*7.6*	*4.3*	*11.9*	*80.0*	*13.7*
Seventh grade.	Number..	423	48	375	228	234	34	279	44	357	14	9	23	380	53
	Per cent..	*100.0*	*11.3*	*88.7*	*53.9*	*55.3*	*8.0*	*66.0*	*10.4*	*84.4*	*3.3*	*2.1*	*5.4*	*89.9*	*12.5*
Eighth grade..	Number..	352	33	319	181	162	25	194	23	242	25	7	32	274	30
	Per cent..	*100.0*	*9.4*	*90.6*	*51.4*	*46.0*	*7.1*	*55.1*	*6.5*	*68.7*	*7.1*	*2.0*	*9.1*	*77.9*	*8.5*
Totals.......	Number..	10,507	1,130	9,377	5,999	6,772	573	3,649	2,422	6,644	1,449	1,231	2,680	9,324	3,653
	Per cent..	*100.0*	*10.7*	*89.3*	*57.1*	*64.5*	*5.5*	*34.7*	*23.1*	*63.3*	*13.8*	*11.7*	*25.5*	*88.8*	*34.7*

RELATED ACTIVITIES.

The details concerning related activities are presented in the tables which follow; and this report is closed with a recapitulation covering all schools.

TABLE 74.

PREPARATORY CLASSES.

PREPARATORY CLASSES.	Number of classes.	Number of teachers.	Average number of pupils belonging.
School No. 1	8	8	215
School No. 49	10	10	290
School No. 52	6	5	106
Totals	24	23	611

TABLE 75.

MANUAL TRAINING CENTERS.

LOCATED AT SCHOOL.	Schools accommodated.	Grades. First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.	Totals.
No. 2	2, 42, 93	...	...	...	...	...	50	70	46	166
No. 9	1, 9, 75, 95	...	...	...	...	...	...	183	70	253
No. 40	40, 43, 71, 77	...	...	...	...	...	...	162	92	254
No. 45	32, 45	...	...	...	...	29	33	29	18	109
No. 47	47, 83	...	...	...	...	...	141	74	72	287
No. 51	51	...	...	...	...	...	...	36	20	56
No. 58	55, 57, 58	...	...	...	...	73	63	52	26	214
No. 59	59	...	...	...	...	...	10	10	9	29
No. 60	60, 61	...	...	...	...	...	...	55	63	118
No. 63	63, 65	...	...	...	...	...	68	49	52	169
No. 64	64	...	...	...	...	...	35	27	15	77
No. 70	70, 72, 84, 92	...	...	...	...	...	...	115	94	209
No. 74	52, 54, 74	...	...	...	...	...	...	109	91	200
No. 76	76	...	...	...	30	42	17	12	3	104
No. 79	14, 39, 49, 61, 79	...	...	...	...	...	...	144	91	235
No. 81	11, 21, 39, 62, 78, 81	...	...	...	...	...	24	67	68	159
No. 86	75, 78, 86	...	...	...	...	...	6	69	46	121
No. 98	30, 48, 68, 98	...	...	...	...	...	...	77	60	137
No. 99	20, 80, 85, 94, 99	...	...	...	...	...	...	98	147	245
No. 106	106, 109	83	77	157	54	17	22	9	18	437
No. 107	100, 107, 116	...	...	93	60	66	10	...	...	229
No. 108	101, 105, 108, 111	...	...	...	74	70	30	26	10	210
No. 113	113, 115	...	...	...	31	51	13	21	16	132
Colored High	100, 103, 110, 112, 116, 118	...	...	...	...	...	44	74	54	172

TABLE 76.

Cookery Centers.

Located at School.	Schools accommodated.	Grades.								Totals.
		First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.	
No. 2	2, 42, 93	......	......	......	......	......	182	108	......	290
No. 40	40, 43, 71, 77, 93	......	......	......	......	......	66	88	17	171
No. 45	32, 45	......	......	......	......	18	34	33	22	107
No. 47	47, 83	......	......	......	......	147	157	42	43	389
No. 51	51	......	......	......	......	......	......	24	18	42
No. 58	55, 57, 58	......	......	......	......	73	88	56	35	252
No. 59	59	......	......	......	......	......	21	11	8	40
No. 60	60, 61	......	......	......	......	......	17	62	38	117
No. 63	63, 65	......	......	......	......	......	57	54	39	150
No. 64	64	......	......	......	......	......	30	24	22	76
No. 70	35, 70, 72, 84, 92	......	......	......	......	......	115	140	......	255
No. 74	52, 53, 74, 80	......	......	......	......	......	......	184	......	184
No. 75	1, 9, 75, 95	......	......	......	......	......	129	114	......	243
No. 76	76	......	......	21	51	27	18	10	......	127
No. 79	14, 39, 49, 61, 79	......	......	......	......	......	......	172	18	190
No. 81	11, 21, 62, 81	......	......	......	......	......	63	55	47	165
No. 85	85, 94, 99	......	......	......	......	......	137	99	16	252
No. 86	78, 86	......	......	......	......	......	32	65	17	114
No. 97	13, 71, 77, 83	......	......	......	......	52	76	134	......	262
No. 98	30, 48, 68, 98	......	......	......	......	......	25	83	22	130
No. 106	106, 109	......	......	......	31	84	92	39	47	293
No. 107	100, 103, 110, 112, 116	......	......	......	......	......	26	125	144	295
No. 108	101, 105, 108	......	......	......	......	115	77	50	27	269
No. 113	113, 115	......	......	......	42	42	43	30	19	176

TABLE 77.

KINDERGARTENS.

KINDERGARTENS.	Number of classes.	Number of teachers.	Number of assistants.	Number of pupils belonging June 30, 1913.	Average number belonging for the year 1912-1913.	Average attendance for the year 1912-1913.	Per cent of attendance for year 1912-1913.	Total enrollment for the year 1912-1913.		Number belonging, including temporary withdrawals, June 30, 1913.
								Boys.	Girls.	
White Schools—										
No. 2	1	1	1	40	43	34	79	35	38	47
No. 3	1	1	1	44	40	34	85	18	34	49
No. 4	1	1	1	39	36	32	89	28	22	44
No. 5	1	1	1	31	37	31	84	27	30	43
No. 9	1	1	1	51	48	42	87	28	31	51
No. 11	1	1	1	39	38	32	84	31	37	39
No. 16	1	1	1	45	39	33	85	31	21	45
No. 19	1	1	1	46	38	31	81	29	20	46
No. 20	1	1	1	31	32	28	88	35	23	45
No. 23	1	1	1	39	42	35	83	29	34	58
Nos. 24 and 38	1	1	1	19	33	27	81	43	37	37
No. 25	1	1	1	34	37	31	84	27	30	45
No. 31	1	1	1	35	32	27	84	35	24	53
No. 33	1	1	1	27	32	27	84	28	24	40
No. 43	1	1	1	40	41	34	83	40	27	57
No. 53	1	1	1	69	41	29	71	34	48	69
No. 55	1	1	1	52	46	40	87	24	48	52
No. 76	1	1	1	39	42	37	88	28	29	44
No. 79	1	1	1	27	25	21	84	15	21	27
No. 93	1	1	1	53	44	37	84	26	40	64
Totals	20	20	20	800	766	642	84	591	618	955
Colored Schools—										
No. 100	1	1	1	5	36	30	83	23	41	5
No. 106	1	1	1	30	32	26	81	39	40	40
No. 112	1	1	2	62	63	51	81	44	38	78
Totals	3	3	4	97	131	107	82	106	119	123
Grand totals	23	23	24	897	897	749	84	697	737	1,078

TABLE 78.

UNGRADED CLASSES.

UNGRADED CLASSES.	Number of classes.	Number of teachers.	Number of pupils belonging June 30, 1913.	Average number belonging for the year 1912-1913.	Average attendance for the year 1912-1913.	Per cent of attendance for year 1912-1913.	Total enrollment for the year 1912-1913.		Number belonging, including temporary withdrawals, June 30, 1913.
							Boys.	Girls.	
White Schools—									
No. 3	1	1	14	13	11	84	21	....	19
No. 9	2	2	26	24	21	88	32	6	26
No. 11	1	1	11	6	8	75	20	....	11
No. 14	1	1	15	12	11	91	22	....	16
No. 20	1	1	13	10	9	90	17	....	13
No. 21	1	1	15	13	10	77	13	6	15
No. 25	1	1	22	26	23	88	30	4	32
No. 29	1	1	12	10	7	70	13	6	12
No. 35	1	1	14	12	9	75	18	....	14
No. 42	1	1	13	14	11	78	29	....	15
No. 48	1	1	9	7	6	86	23	....	9
No. 54	1	1	16	15	12	80	25	5	16
No. 58	1	1	7	10	8	80	19	....	12
No. 71	1	1	16	14	13	93	27	....	16
No. 76	1	1	20	20	18	90	22	5	21
No. 81	1	1	14	10	8	80	18	....	15
No. 83	1	1	8	10	9	90	28	....	12
No. 93	2	2	42	39	36	92	55	20	44
No. 98	1	1	16	9	7	78	24	....	16
[1]No. 20	1	1	10	10	8	80	8	9	13
[1]Kernan's Hospital	1	1	9	9	9	100	13	21	9
[1]Children's Hospital	1	1	17	15	14	93	3	16	17
[2]No. 76	1	1	10	12	10	83	11	4	14
[3]No. 7	1	1	14	13	9	69	13	3	14
Totals	26	26	363	333	287	86	504	105	401
Colored School No. 109	1	1	12	13	10	77	35	10	12
Grand totals	27	27	375	346	297	88	539	115	413

[1] Classes for crippled children.
[2] Open air class for anæmic children.
[3] Class for the study and observation of mentally subnormal children.

TABLE 79.

RECAPITULATION.

Net roll or register.

DAY SCHOOLS.	Boys.	Girls.	Totals.
Normal schools—			
Teachers' training schools:			
Number in second year classes.....	6	71	77
Number in first year classes.......	3	90	93
Totals.........................	9	161	170
Secondary schools—			
Number in fifth year classes.........	....	4	4
Number in fourth year classes.......	266	404	670
Number in third year classes.........	289	464	753
Number in second year classes.......	488	640	1,128
Number in first year classes.........	944	963	1,907
Totals.........................	1,987	2,475	4,462
Elementary schools—			
Grammar grades:			
Number in eighth grade...........	1,187	1,417	2,604
Number in seventh grade..........	1,632	1,930	3,562
Number in sixth grade.............	2,498	2,805	5,303
Number in fifth grade..............	3,549	3,710	7,259
Number in fourth grade............	4,391	4,519	8,910
Totals.........................	13,257	14,381	27,638
Primary grades:			
Number in third grade.............	5,060	5,093	10,153
Number in second grade...........	5,403	5,246	10,649
Number in first grade..............	6,264	5,648	11,912
Number in kindergartens...........	512	566	1,078
Number in ungraded classes, including special classes and Parental School	381	63	444
Totals.........................	17,620	16,616	34,236
Summary—			
Number in normal schools...........	9	161	170
Number in secondary schools.........	1,987	2,475	4,462
Number in elementary schools........	30,877	30,997	61,874
Grand totals, day schools.........	32,873	33,633	66,506

TABLE 79—*Continued.*

RECAPITULATION.

Net roll or register.

NIGHT SCHOOLS.	Males.	Females.	Totals.
Secondary schools	563	629	1,192
Elementary schools	999	737	1,736
Vocational schools	22	456	478
Totals, night schools	1,584	1,822	3,406

SUMMER SCHOOLS.	Boys.	Girls.	Totals.
Review schools—			
Secondary school		82	82
Elementary schools	333	350	683
Vocational school	107	90	197
Totals, summer schools	440	522	962

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COMPLIMENTS OF . . .

BERNARD J LEE

WARDEN

ANNUAL REPORT

OF THE

VISITORS TO THE CITY JAIL

TO THE

MAYOR AND CITY COUNCIL OF BALTIMORE

FOR THE

FISCAL YEAR ENDING DECEMBER 31, 1913

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER

1914

OFFICERS

OF THE

BALTIMORE CITY JAIL, 1913

Board of Visitors

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FREDERICK W. ECKLES
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JOHN T. RADFORD
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MOSES N. FRANK

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JAMES A. McQUADE

Warden

BERNARD J. LEE

Physician

GEORGE L. WILKINS

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BOARD'S REPORT

Baltimore, January 1, 1914.

To the Honorable the Mayor and City Council of Baltimore.

Gentlemen:

In submitting our annual report as members of the Board of Visitors to the Baltimore City Jail, we desire to respectfully call your attention to the general good condition of this institution, as shown by the reports of Warden Lee; Dr. George L. Wilkins, Jail physician; and Mr. Harry C. Martin, clerk.

During the past year the Board has adopted a system of establishing schools for both men and women, thereby not only adding to the mental comfort of the inmates by occupying their time, but also improving, to a most satisfactory extent, the neglected education of some of the prisoners, so that when they leave the prison they will have been materially benefited and enabled to occupy a better position than when they entered the institution. The advantages of this system are apparent.

At this time we deem it proper to make a reference to a subject which is causing considerable comment in the outside world, namely: "The Elimination of Contract Labor." It is our opinion, after careful consideration, coupled with our wide experience on this subject, that any change in this direction should be very carefully weighed, especially in cases of long-term prisoners. We feel qualified to say that the health of all prisoners is considerably better when at work than when confined in idleness. We do not doubt that the present agitation on the subject of abolishing contract labor has been due to the severe tasks imposed upon prisoners in certain penal institutions where investigations were made; the task being so severe in many cases that the health of the prisoner has been impaired rather than benefited. In this connection, we desire to state that the method adopted at the Baltimore City Jail is of the contrary effect. We have made a study of the welfare of the prisoner, not the contractor, before the task now in vogue for the various prisoners was adopted.

After considerable thought, during which time various experiments were made by us, the task of the prisoner has been reduced to such an extent that he or she is not only able to perform the imposed task without any difficulty, but is also able, if the prisoner desires, to make an extra task for his or her own benefit. The prisoner receives from the Jail authorities twenty-five per cent. of the amount received by the Board for the prisoner's daily task, provided he or she is of good behavior and does not violate the rules of the institution. This bonus, in addition to the extra task or tasks which the prisoner is now enabled to earn for his or her own self, creates a spirit of ambition and induces them to work more earnestly, so that they may feel that they are not merely performing a task in a penal institution, but are once more wage-earners and receiving a fair compensation for the work they perform. This innovation also adds to the good discipline of the institution and can not but help to improve the general well-being of the inmates. We sincerely trust that the General Assembly will not abolish contract labor at the City Jail until they give the institution something in its stead which will keep the inmates properly and satisfactorily employed.

In conclusion, it is our desire to express our deep appreciation of the splendid work which has been done by Warden Lee and all of his assistants.

Respectfully submitted,

Moses N. Frank, *President*,
James A. McQuade, *Secretary*,
Frederick W. Eckles,
John T. Ford,
John T. Radford,
Charles A. Irwin,
George M. Henderson,
Henry P. Hoffman,
John R. Fisher,
Board of Visitors.

WARDEN'S ANNUAL REPORT

FOR THE

YEAR ENDING DECEMBER 31, 1913.

BALTIMORE, January 1, 1914.

To the Honorable Board of Visitors to the City Jail.

GENTLEMEN:

Conforming to custom and in accordance with law, I herewith submit for your consideration and approval my second annual report of the operations of the Baltimore City Jail for the year ending December 31, 1913. The work as mapped out in the beginning of our stewardship has progressed rapidly and effectively, and a most satisfactory condition exists at this time throughout the institution.

POPULATION.

The year 1913 has been a record breaking one as to the total number of prisoners committed and released. During the year there were 10,079 prisoners committed and 10,057 released. The daily average for 1913 was 571 as against 481 for 1912. I am pleased to report that notwithstanding this increased number of prisoners to care for, and also laboring under the increased cost of living, we have met all our expenses and kept within our appropriations.

DISCIPLINE.

The discipline throughout the year has been excellent. This is indeed gratifying when we stop to consider that the greater number of our inmates are serving small sentences, in lieu of a fine, with no time allowance for good behavior, and how perplexing it is at times to decide what punishment to inflict on this class for slight, but willful, infraction of the rules. It has not been necessary to resort to punishment, except in rare instances, as I have found that a reprimand is, in most cases, sufficient to cause the offenders to obey the rules. I am firm in my belief that the majority of men in prisons today, if given proper treatment and right management, would show their appreciation by rendering in return the best service in them. I attribute whatever success I have had by following this rule in my dealing with the men and women in my care.

BUTTON SHOP.

The employment in prisons of inmates is a very important problem and one closely allied with its successful management. Many theories along this line have been advanced. I believe this problem has been successfully solved, in so far as the Baltimore City Jail is concerned, in the induction of the industry of making pearl buttons. This is a well-organized and equipped industry, easily learned and managed with the view of securing the highest possible efficiency among the inmates. The tasks are so arranged that every one employed, if they so desire, can make a creditable sum of money for themselves in overtime work. As our shop is operated upon a co-operative plan, this overtime, in conjunction with the twenty-five per cent. of what the Board receives for his task, makes the earning capacity of the prisoner amount to from eight to fifteen dollars per month. The duties in this shop are light and are not attendant with danger of injury.

FILTERS.

In line with the progressive policy adopted by your Honorable Body, two double-cylinder "Loomis" improved water filters were installed in the Jail in August of this year—one to supply the male department and one to supply the female department. These filters were not purchased as a luxury, but as a necessity, and the benefits obtained from a standpoint of comfort and safety to the inmates are manifold.

IMPROVEMENTS.

During the year the Jail proper and the Warden's residence have been connected up with the new sewerage and storm-water system.

A new hog pump has been installed in the boiler-room and the old one rehabilitated. This enables us to always have one in reserve.

A new cable has been put in the elevator in the main hall.

Renewed the piping in the hot-water line from boiler-room to the women's building, also renewed piping in the hot and cold water line to the bakery.

Added nineteen additional lights in the chapel, also thirty additional lights in the basement of Section 2 (now in use as schoolroom).

Removed the small fountain in front of the women's building and replaced the old brick with a concrete pavement. This fountain was added to the fountain in the front yard (north) and contributes no little to its beauty.

Removed the old wooden coping from south wall in back yard and replaced same with brick.

These improvements were made possible by the hearty co-operation of the Building Inspector, Mr. Clarence E. Stubbs, who also furnished us throughout the year with paints, oils, cement, firebrick, etc.

At our solicitation, and with the co-operation of his Honor, the Mayor, the Paving Commission, the City Engineer and the City Forester the approach to the Jail has been improved with modern up-to-date pavements. Buren street, from Madison street to Eager street, has been laid with vitrified brick;

the sidewalk has been parked and the old brick pavement replaced with one of cement. We have continued the cement pavement from entrance in front yard to the administration building.

The lawns in the front and back yards have received special attention during the year.

PRISON CONGRESS.

It was my pleasure, in company with Mr. James A. McQuade, a member of the Board of Visitors, to attend the sessions of the Prison Congress, held at Indianapolis, Ind., October 11-16 of this year. The proceedings were of a most interesting and instructive character and afforded me another opportunity to discuss and exchange with interested persons ideas relative to criminal laws and modern methods of governing prisons, as well as an opportunity to visit quite a number of prisons in the Middle West. It is gratifying to me to report that our institution compares favorably with the best of them.

SCHOOLS.

The Baltimore City Jail has always taken a high rank as a punitive establishment. Its inmates always pay the penalties of their transgressions against the State according to the court's decree. Firm discipline prevails and the prisoners realize their responsibility to the prison regulations. It can be claimed with justice that the dignity of the law is scrupulously upheld, but the discipline has never been harsh. Each inmate, no matter how serious his offence, receives humane treatment and sympathetic attention. In other words, the prison serves its purpose as a punitive establishment with firmness and moderation.

For some time the Board has been of the opinion that the Jail has other functions than those of mere punishment. The prisoner doubtless ought to pay the penalty of his crime, but the State has duties toward itself and toward the prisoner during his incarceration. It is not enough that he be given wholesome food and proper shelter, nor that he be made to labor and repay the State part of the costs of his trial and detention. When he leaves the prison he should be a better and more efficient man. He should have acquired at the Jail training and information which he lacked before. His moral, intellectual and physical powers should be developed.

To this end the Board of Visitors have established a night school for the long-term male prisoners and a day school for the female prisoners.

In securing the services of Mr. Charles J. Koch, Assistant Superintendent of Public Schools in Baltimore, in starting and conducting the work in the male school, assisted by Messrs. M. A. Clemens, J. O. Martin and A. E. Williams of the Educational Department of the Young Men's Christian Association, we have indeed been most fortunate. These gentlemen are giving their time and labor gratuitously. The female school has been placed in charge of Miss Jeannette Campbell, with an assistant, Miss Miriam Bauer—both teachers in the schools of Baltimore

A report of Mr. Koch and Miss Campbell, as to their respective schools, is herewith appended:

REPORT OF MR. KOCH.

Mr. Bernard J. Lee, *Warden*.

Dear Sir—The first session of the male school was held on Tuesday, December 16, 1913, and about one hundred prisoners of Section 2 attended.

A preliminary survey showed that at least four grades would be necessary, and the prisoners have been thus graded. There will probably be more divisions later. As far as possible, the work is made to grow directly out of the needs of each prisoner. This not only vitalizes the instruction, but serves the best utilitarian purpose. The extreme earnestness which is manifested in the work gives the best assurance of success. The range of studies is extensive—from the first ments of English and arithmetic to history, higher English and mathematics.

Civics and general history are deemed of such importance that a half hour is allotted to those studies at each session. The prisoners seem to enjoy these lessons. They are especially interested in the stories of great lives. Without preaching to them, the instructor tries to influence them for good by showing what great deeds have been accomplished by men as frail and as humane as many of them.

Every session closes with singing. This, too, excites great interest and the prison corridors resound with hopeful strains. If the same sentiments which prevail at closing could be made permanent, no prisoner would return to prison after his release. That this happy state may be brought nearer to realization is the fond hope of the teachers and Board.

Respectfully submitted,

CHARLES J. KOCH.

REPORT OF MISS CAMPBELL.

MR. BERNARD J. LEE, *Warden.*

DEAR SIR—The school in the female department began on October 4, 1913. At that time there were eighty-nine women in the Jail; sixty-three attended the first session. The greatest number were of the class known as "long time girls."

There were two grades established—the beginners' and the advanced class. The beginners' class was composed of "long time girls" who could neither read nor write, who had no knowledge of the alphabet nor any idea of counting.

The first lessons given were to form the letters and recognize them alone and in words. Any "girl" can now write the entire alphabet, join the letters to make a word and form simple sentences. There are but two "girls" who now have difficulty in reading at sight simple stories.

The rhythmic method is used in teaching arithmetic. Spelling is taught by the flash method. The writing is exceptional. When the school started the "girls" were accustomed to designate themselves by cross-marks; after three lessons one "girl" signed her name. The progress made by these "girls" is not only creditable, but wonderful. The average attendance in this class is twenty-one.

The advanced class is composed of "girls" of three divisions—the long time, short time and court "girls." Their previous education varies greatly, but all have had some schooling. The studies given in this class are language, spelling, arithmetic, reading, writing and physiology, emphasizing the first three. The progress of this class is best seen in the letters which they now write, in their conversation, their penmanship and spelling. The average attendance of this class is eighteen.

The "girls" are greatly interested in their work and I feel, from the words of many who have been released, that the school is most beneficial.

Respectfully,

JEANNETTE CAMPBELL.

RELIGIOUS SERVICES.

As in the past, the religious services during the year have been ably looked after by the Prisoners' Aid Association. All denominations are represented in this work. Your attention is especially called to the most interesting report of this Association, which is attached hereto, showing the varied character, as well as remarkable work, accomplished during the year.

The Rev. Father Coppens, of Loyola College, has looked after the spiritual welfare of our Catholic inmates unremittingly and cheerfully responds to calls day or night.

The good sisters of the Sacred Heart Convent visit the women's department every Sunday and conduct services.

Rabbi L. M. Palitz has been untiring in attending to the services of our Hebrew population on Saturday afternoons.

CONCLUSION.

In concluding this report I desire to thank the President and Board of Visitors for their confidence and their help in solving the many vexatious problems attendant upon the management of this institution and would state that, to the best of my ability, the wishes of the Visitors, as expressed from time to time, together with the routine duties of the Warden for the coming year, will be executed to the best of my ability, with the sole aim of keeping this institution at its high state of efficiency.

I also take pleasure in acknowledging the valuable assistance rendered by the Deputy Warden, Mr. Guy L. Upperco; Dr. George L. Wilkins, the Jail physician; Mr. Harry C. Martin, the clerk; the keepers and matrons, who have been constant in their endeavor to discharge the duties of their respective positions.

Respectfully submitted,

BERNARD J. LEE,
Warden.

EXHIBITS

EXHIBIT A.

A summary of the appropriations for the twelve months ending December 31st, 1913. Also a summary of the revenues of the Jail and their dispositions, and a comparative statement for the years 1913, 1912, 1911 and 1910.

APPROPRIATIONS.		EXPENDITURES.	
Salaries	$36,050 00	Salaries.	$36,020 80
		Balance unexpended to surplus credit	29 20
	$36,050 00		$36,050 00
Expense	$27,500 00	General subsistence	$18,014 21
		Heating and lighting	1,069 53
		Machinery and supplies	1,492 18
		Clothing, drygoods, etc	2,168 23
		Sanitary	1,576 20
		Hospital drugs	770 95
		Hospital subsistence	275 83
		Incidental expenses	1,132 87
		Warden's subsistence	1,000 00
	$27,500 00		$27,500 00

EXHIBIT A—*Continued.* Revenues.

Amount paid to City Comptroller's account Jail revenue		$7,314 14	Outstanding accounts January 1, 1913	$2,536 22
Prisoners' shop earnings		4,136 65		
Outstanding Accounts:			Earnings During the Year:	
Maryland Button Co.	$1,099 32		Maryland Button Co.	7,975 72
U. S. Marshal	273 60		U. S. Marshal	1,414 40
U. S. Commissioner of Immigration	35 50		U. S. Commissioner of Immigration	62 00
U. S. Revenue Service	11 50		U. S. Revenue Service	82 70
Dorchester County	53 50		Board, county prisoners	674 50
Frederick County	27 50		Miscellaneous, junk, etc.	205 67
		1,500 42		
		$12,951 21		$12,951 21

In addition to the revenues from the Maryland Button Co., viz: $7,975.72, the said Company furnished the following amounts of bituminous coal:

2550 tons costing	$8,681 28

EXHIBIT A—*Continued*. SHOP EARNINGS (PRISONERS' SHARE).

EARNINGS.		WITHDRAWALS.	
January	$333 55	January	$347 96
February	306 94	February	209 49
March	355 77	March	328 15
April	369 40	April	201 82
May	380 85	May	311 68
June	351 71	June	401 84
July	316 31	July	446 42
August	326 94	August	328 52
September	321 95	September	382 81
October	355 41	October	286 12
November	346 69	November	342 80
December	371 13	December	687 88
Total	$4,136 65	Total	$4,275 49
Total Earnings	$4,136 65	Total Withdrawals	$4,275 49
Balance due prisoners December 31, 1912	1,338 23	Balance due prisoners December 31, 1913	1,199 39
	$5,474 88		$5,474 88

EXHIBIT A—*Concluded.*

	1913		1912		1911		1910	
	Yearly	Daily	Yearly	Daily	Yearly	Daily	Yearly	Daily
Salaries of officers (per capita cost of maintenance)..........	$63.08	.1728	$79.24	.2036	$62.84	.1721	$57.46	.1574
Subsistence (per capita cost of maintenance).................	31.55	.0864	34.40	.10	29.99	.0822	28.96	.0793
Heating and lighting (per capita cost of maintenance)..........	1.87	.0051	1 25	.0035	.79	.0022	.70	.0019
Machinery and supplies (per capita cost of maintenance) ..	2.61	.0072	1.70	.005	1.37	.0038	.95	.0026
Clothing, drygoods, etc. (per capita cost of maintenance) ..	3.80	.0104	2.76	.008	4.73	.0129	5.68	.0155
Sanitary (per capita cost of maintenance).................	2.76	.0076	3.56	.01	2.68	.0073	2.30	.0063
Hospital subsistence (per capita cost of maintenance)..........	.48	.0013	.49	.0014	.34	.0009	.57	.0016
Incidental expenses (per capita cost of maintenance)..........	1.98	.0054	3.27	.01	3.11	.0085	2.45	.0067
Hospital drugs (per capita cost of maintenance)	1.35	.0037	1.73	.0048	1.10	.0003	1.50	.0042
Warden's subsistence (per capita cost of maintenance)..........	1.75	.0048	2.08	.0057	1.73	.0047	1.63	.0045
Miscellaneous (per capita cost of maintenance)	....	....	5.43	.0015	1.65	.0045	1.55	.0043
Totals....................	$111.23	.3047	$130.96	.3535	$110.43	.2994	$103.75	.2843

EXHIBIT B.

A comparative table of the monthly and yearly averages of the prisoners for 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912 and 1913.

MONTHS	1913	1912	1911	1910	1909	1908	1907	1906	1905
January	568	535	594	553	729	763	752	738	665
February	562	473	580	586	715	782	708	687	635
March	568	469	542	605	690	749	684	896	705
April	555	479	515	604	708	709	697	663	676
May	577	440	551	604	729	644	714	674	679
June	565	417	564	623	695	662	738	828	729
July	571	425	611	645	705	788	772	796	742
August	580	486	637	644	764	889	779	870	794
September	591	505	633	658	757	903	768	818	794
October	585	523	658	688	730	928	707	818	764
November	544	511	526	599	672	832	689	776	741
December	586	510	532	567	572	735	696	720	754
Yearly Average	571	481	579	615	706	784	725	749	723

Highest number in Jail	623	610	695	725	820	960	825	897	826
Lowest number in Jail	524	390	467	519	539	584	638	621	607

EXHIBIT C.

Number of Prisoners Received During 1913		Number of Prisoners Released During 1913	
January	830	January	793
February	745	February	789
March	866	March	834
April	713	April	714
May	785	May	792
June	899	June	900
July	985	July	966
August	873	August	853
September	894	September	890
October	818	October	891
November	798	November	773
December	873	December	862
Total	10,079	Total	10,057

Total received, 1913	10,079
Total released, 1913	10,057
Increase	22
In Jail December 31, 1912	545
In Jail December 31, 1913	567

EXHIBIT D.

The work accomplished in the sewing room and the laundry at the Annex has added no little to the general condition of the Institution, and a list that speaks for itself is appended.

	Made	Washed	Repaired
Overalls	1,002	21,978	3,581
Shirts	1,240	20,564	2,550
Sheets	447	28,628	914
Pillow Cases	782	26,057	877
Dresses	95	2,811	329
Towels	650	19,442	....
Gowns	106	942	....
Aprons	174	2,029	....
Caps	120	849	....
Spreads	....	1,430	....
Blankets	....	2,211	....
Coats and White Pants	35	1,106	....
Table Cloths, Napkins	18	386	....
Miscellaneous	120	1,214	279
Total	4,790	119,647	8,530

PHYSICIAN'S REPORT

Baltimore, January 1, 1914.

To the Honorable Board of Visitors to the City Jail.

Gentlemen:

I have the honor to submit the report of the medical department of the Jail for the fiscal year ending December 31, 1913, with a tabulated statement and summary of the work of the department.

The total number of cases treated during the year was *13,807, the total number of prescriptions was 13,791 and the total number of special diets was 7,075.

There were ten deaths during the year, or a death rate of .72 per 1,000 cases treated. Excluding two deaths by hanging and one death by accident, the death rate would be .51 per 1,000 cases treated. The causes of death were as follows: Bright's disease, 3; pneumonia, 2; strangulation by hanging, 2; accident, 1; cellulitis, 1; endocarditis, 1. Three of the cases were complicated with delirium tremens. Six of the deceased were ill when admitted to the Jail—two dying one day after admission; one, two days after; one, three days after; one, fifteen days after; and one, twenty-five days after. The proper place for such cases would be a hospital and not a jail.

During the year there were 1,140 cases of alcoholism and 62 of delirium tremens. In this connection I will quote from a former report: "The laws relating to chronic drunkards should be radically changed. The present laws neither benefit the State nor the individual. They utterly fail in their purpose. The same individual returns to the Jail over and over again on the charge of drunkenness. If he recovers from the immediate effect of his alcoholism, he goes out with the desire for drink just as strong as ever. To cure drunkenness, the individual should be separated from the opportunity to gratify his morbid desire long enough to take away his appetite for drink and reform him mentally and physically. To accomplish this it will require a period ranging from one to three years." To this end, the law should make repeated and habitual drunkenness a penal offence, punishable with a prison term of from one to three years with hard labor, the proceeds of his labor to go to his family.

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*The same person is, during the year, treated a number of times for the same complaint, hence the large total of cases treated.

There were 13 drug habits during the year, all of whom recovered.

The records show 16 cases of pulmonary tuberculosis, 28 glandular, 1 intestinal and 1 of the testicle. There were no deaths from this disease, except a case of tubercular pneumonia.

Forty-seven insane prisoners were admitted. The Jail is not the proper place for the insane, but our comments in the past have been sufficiently emphatic on this point.

It is most earnestly hoped in the interest of the Jail administration that, during the present session of the Legislature, Section 144 of the City Charter will be so amended as to facilitate the transfer to an insane asylum of the insane sentenced to the Jail for short periods on minor offenses. The present laws, both local and State, fail in their purpose.

During the year there were one case of measles and two cases of diphtheria, but by prompt isolation the diseases were limited to the original cases.

Because of the appearance of smallpox in certain sections of the city, beginning in the fall of 1912 and continuing until the spring of 1913, we made a general vaccination of the inmates of the Jail. There was a total of 2,262 vaccinations, and of this number 1,508 were successful and 754 failed.

I wish to express my thanks to the Health Department for their liberal supply of virus for this work.

Thanking the Board of Visitors, the Warden and other officers of the Jail for their constant co-operation, I respectfully submit this report.

George L. Wilkins,
Physician to the City Jail.

TABULATED STATEMENT AND SUMMARY OF THE WORK OF THE MEDICAL DEPARTMENT.

	January	February	March	April	May	June	July	August	September	October	November	December	Total
Abscess	7	3	3	2	4	4	7	2	1	3	8	8	52
Abortion	....	....	....	....	....	1	....	....	....	....	....	....	1
Acne	4	....	1	....	2	4	3	2	....	1	....	....	17
Alcoholism	20	38	55	81	170	205	180	115	57	64	66	89	1140
Alopecia	....	....	....	1	....	....	....	....	....	....	....	....	1
Amenorrhea	....	....	1	....	1	....	....	....	1	....	....	....	3
Anaemia	....	....	....	....	1	....	1	....	....	1	1	3	7
Anaemia Pernicious	....	....	....	....	....	....	....	....	....	....	1	....	1
Angina-Pectoris	....	2	....	....	....	....	....	....	1	....	....	....	3
Appendicitis	....	....	....	....	1	1	3	....	....	....	....	....	5
Arterio Sclerosis	2	....	....	2	....	....	1	1	....	....	....	....	6
Arthritis	....	1	....	1	2	....	1	....	....	....	....	....	5
Asthma	1	1	4	5	12	3	2	4	5	2	4	....	43
Accidentally killed—elevator	....	....	1	....	....	....	....	....	....	....	....	....	1
Balanitis	....	2	1	....	....	....	1	1	1	....	....	....	6
Bite—Animal	1	1	....	....	....	1	....	....	....	1	1	....	5
Bite—Human	1	1	2	1	2	4	....	1	2	1	....	1	16
Bite—Insect	....	....	....	....	....	1	....	2	....	....	....	....	3
Bladder—Irritable	3	11	7	3	4	7	2	1	2	4	1	6	51
Bladder—Paralysis	....	....	....	....	....	....	1	....	....	....	....	....	1
Boil	....	3	2	2	9	4	10	8	4	7	2	....	51
Bronchitis	1	3	3	6	3	4	1	4	2	7	4	7	45
Bruise	1	....	6	1	....	3	19	31	23	4	2	6	96
Bubo	3	7	2	....	4	....	1	1	2	....	1	2	23
Burns	1	2	4	11	11	7	6	3	4	3	2	4	58
Bright's disease	....	....	....	....	1	1	....	....	....	....	1	1	4
Carbuncle	....	....	....	....	....	....	....	2	....	....	....	....	2
Catarrh, Nasal	4	4	7	5	7	8	1	1	1	4	1	3	46
Carcinoma	....	....	....	....	....	....	1	....	....	....	....	....	1
Cellulitis	....	....	....	....	....	1	....	....	....	....	....	....	1
Chancroids	5	....	....	3	1	1	1	....	....	2	....	1	14
Chapped lips	....	....	....	1	4	....	....	....	1	1	1	2	10
Colic, Intestinal	6	8	9	7	5	2	8	12	7	2	2	5	73
Constipation	115	128	135	144	206	239	369	247	223	164	178	125	2293
Conjunctivitis	11	18	16	20	112	37	58	29	13	22	20	12	368
Collapse—heat	....	....	....	....	....	1	1	....	....	....	....	....	2
Coryza	74	101	85	44	64	48	57	72	65	89	64	53	816
Corneitis	....	....	....	1	2	2	2	1	....	....	....	....	8
Corns	....	....	....	....	....	....	3	2	....	....	1	1	7
Coughs and Colds	102	92	115	88	106	116	98	96	97	81	103	111	1205
Cystitis	....	....	....	....	....	....	1	....	1	1	....	1	4

SUMMARY OF THE MEDICAL DEPARTMENT.—*Continued.*

	January	February	March	April	May	June	July	August	September	October	November	December	Total
Debility, General	16	10	8	3	10	21	21	20	8	5	4	1	127
Delirium Tremens	12	7	....	3	9	4	21	....	....	3	2	1	62
Dental caries	....	5	2	3	11	14	18	10	2	....	....	....	66
Diarrhoea	9	17	24	17	65	30	44	41	17	6	7	10	287
Diabetes	....	....	1	....	2	....	....	....	....	2	....	....	5
Diphtheria	....	....	....	....	....	....	1	1	....	....	....	....	2
Dislocations	....	....	....	1	....	....	....	....	....	....	....	1	2
Dermatitis	....	....	....	....	1	....	2	1	1	....	15	....	20
Drug Habit	....	....	....	3	1	....	....	3	....	2	2	2	13
Dysentery	1	5	4	1	....	1	6	4	1	5	3	1	32
Dyspepsia	....	....	....	1	7	2	15	13	8	2	1	2	51
Dysmenorrhoea	....	....	....	....	....	....	....	....	....	....	1	....	1
Eczema	6	28	21	10	22	25	26	12	17	9	6	13	193
Epilepsy	....	3	....	4	5	4	26	6	6	2	....	1	57
Epistaxis	....	1	....	1	....	2	....	1	1	....	....	1	7
Epithelioma	....	....	....	....	....	....	1	....	....	....	....	....	1
Erysipelas	3	2	1	....	....	....	....	....	....	....	....	....	6
Eye—foreign body in	....	3	1	....	2	4	9	7	4	7	8	2	47
Fever, Intermittent	2	....	....	....	....	....	2	....	2	1	1	3	11
Fever, Rose	....	....	....	....	1	....	....	....	....	....	....	....	1
Fracture	1	1	1	1	....	....	....	....	1	2	1	....	8
Frostbite	1	....	1	....	....	....	....	....	....	....	....	1	3
Gastritis	....	....	....	1	1	6	3	....	1	....	1	....	13
Gingivitis	....	....	....	1	2	....	1	....	2	1	1	1	9
Gland enlarged	....	1	1	2	3	3	1	1	....	2	....	....	14
Gonorrhoea	10	17	20	26	31	23	30	26	17	15	21	14	250
Headache	23	28	20	15	32	38	52	52	36	29	20	16	361
Heart—Val. Dis.	7	2	5	2	10	....	7	....	3	1	1	3	41
Heart—Palpitation	....	....	....	2	1	....	1	....	1	....	4	1	10
Hemorrhoids	2	6	5	6	9	8	9	4	4	3	6	3	65
Hemorrhage — Stomach	....	....	....	....	....	1	....	....	....	....	....	....	1
Hernia	....	....	....	....	2	1	....	....	....	1	....	....	4
Herpes	....	....	1	....	3	1	1	1	3	7	5	1	26
Hepatitis	....	....	....	....	1	....	....	....	....	....	....	....	1
Hiccough	....	....	....	....	1	....	....	....	....	....	1	....	2
Hysteria	1	....	1	....	5	1	....	....	....	2	1	....	11
Indigestion	44	25	49	47	48	54	93	46	59	43	27	22	557
Influenza	11	....	....	1	....	....	....	....	....	....	....	....	12
Insane	8	7	5	4	....	1	11	1	3	3	2	2	47
Insane, Suspected	....	....	....	....	....	....	4	5	1	....	....	1	11
Insomnia	8	9	5	2	3	5	12	14	1	9	6	12	86

SUMMARY OF THE MEDICAL DEPARTMENT.—*Continued.*

	January	February	March	April	May	June	July	August	September	October	November	December	Total
Jaundice			1			1	1						3
Laryngitis		2	5	1	3	1	2	3	5	3			25
Lipoma								1		1		1	3
Lichen—Simplex								1					1
Locomotor Ataxia												1	1
Lumbago	17	9	10	19	30	8	5	13	17	13	14	16	171
Mastitis				1		1	2				1		5
Measles		1											1
Menorrhagia	1	1	4	4	1	2	3	2	4	6		2	30
Myalgia	67	66	73	81	85	83	87	79	47	42	67	52	829
Nasal septum—deviation of							1						1
Nephritis—Acute		1											1
Neuralgia	4	5	2	8	8	5	21	10	9	20	12	11	115
Neurasthenia			11	14	16	7	26	19	4	2	7	2	108
Neuritis												1	1
Oedema		1											1
Operations--Surgical			1	6	4	2	5	8	4	5	14	13	62
Orchitis			3	4	5	8	6	2		1	1		30
Otalgia	1					3	1	2					7
Otitis Media	6	5	2	4	4	3	3	3		4	9	4	47
Ovaritis										1			1
Paralysis							6	1					7
Pediculosis-Pubis	5	4	3	3	1	4	1		1	4	2		28
Periostitis	1					1					1		3
Pharyngitis	44	41	39	21	54	27	16	21	33	32	36	28	392
Phimosis				1							1		2
Phtheriasis Corporis						1							1
Pleurodynia	1	1	1				3			2		2	10
Pleurisy				1									1
Pneumonia		1							1				2
Pregnancy							2		1				3
Prostatitis						1				1			2
Proctitis									2				2
Pruritis				1							1		2
Psoriasis					2			1	1				4
Pyaemia											1		1
Rheumatism	36	54	77	33	60	65	50	26	44	32	42	54	571
Rhus poisoning						1				1			2
Riggs disease							1					1	2

SUMMARY OF THE MEDICAL DEPARTMENT.—*Continued.*

	January	February	March	April	May	June	July	August	September	October	November	December	Total
Scabies	2	1	2	4	2	....	....	....	1	2	4	2	20
Sciatica	....	....	....	....	....	....	....	....	1	5	....	....	6
Sprain	7	13	16	11	21	20	15	9	13	8	10	13	156
Stomatitis	3	2	2	10	20	8	9	7	3	6	4	8	82
Stye	....	2	1	....	1	1	1	2	....	....	....	1	9
Syphilis, Primary	6	7	11	18	15	6	5	12	11	15	6	8	120
Syphilis, Secondary	14	14	24	22	21	15	12	6	2	6	13	30	179
Strangulation—hanging	1	....	....	1	....	....	....	....	....	....	....	....	2
Tinea—Favosa	....	2	1	1	....	1	2	2	....	....	....	....	9
Tinea—Sycosis	....	1	....	....	....	....	....	....	....	....	....	....	1
Teeth extracted	12	16	27	22	22	11	7	3	5	5	7	....	137
Toothache	20	7	12	23	9	22	25	53	50	34	25	14	294
Tonsilitis	11	23	10	17	27	9	4	8	4	7	8	6	134
Tonsilitis—Follicular	3	3	....	....	....	....	2	1	1	1	1	3	15
Toe-nail—Ingrowing	....	....	....	....	....	....	....	....	....	....	....	1	1
Torticollis	....	....	....	....	....	....	....	....	....	1	....	....	1
Thrush	....	....	....	....	1	1	....	....	....	....	....	....	2
Tuberculosis—													
Pulmonary	1	....	....	1	5	1	5	2	....	1	....	....	16
Glandular	....	....	3	....	....	3	8	4	1	4	4	1	28
Intestinal	....	....	....	....	....	....	....	....	1	....	....	....	1
Testicle	....	....	....	....	....	1	....	....	....	....	....	....	1
Suspected	....	....	....	....	....	....	10	1	....	3	....	....	14
Ulcer, Simple	2	1	3	8	21	15	6	4	7	8	8	17	100
Ulcer, Varicose	2	1	3	....	....	....	2	....	4	2	1	....	15
Urticaria	8	2	2	9	6	9	11	8	7	5	1	6	74
Urine—Incontinence	....	....	....	....	....	....	2	2	4	....	3	3	14
Varicocele	....	....	....	....	....	1	....	....	....	....	....	1	2
Vertigo	11	7	6	18	17	14	11	6	4	4	4	4	106
Warts—Venereal	....	....	....	....	....	1	1	....	....	....	2	1	5
Wen	....	....	....	....	....	....	3	3	1	....	1	1	9
Wounds, Gun Shot	....	....	....	....	1	....	2	2	1	7	....	....	13
" Other	53	37	56	70	86	67	156	67	54	62	29	41	789
Totals	865	937	1045	1019	1553	1388	1798	1308	1053	984	949	908	13807

SUMMARY OF THE MEDICAL DEPARTMENT.—*Continued.*

TOTAL NUMBER OF CASES TREATED.

	January	February	March	April	May	June	July	August	September	October	November	December	Total
White Male.........	289	409	410	405	730	621	841	516	312	341	311	368	5553
White Female.......	119	34	41	56	86	48	81	72	73	29	45	44	728
Colored Male........	295	403	481	446	632	589	730	617	548	496	470	418	6125
Colored Female	162	91	113	112	105	130	146	103	120	118	123	78	1401
Totals	865	937	1045	1019	1553	1388	1798	1308	1053	984	949	908	13807
Cured................	769	828	923	780	1340	1147	1399	1046	801	788	625	750	11196
Relieved	96	108	121	238	212	239	398	262	251	196	323	158	2601
Died	1	1	1	1	1	2	1	....	1	....	1	....	10
Totals	865	937	1045	1019	1553	1388	1798	1308	1053	984	949	908	13807
Prescriptions........	894	985	1105	1019	1381	1211	1528	1355	1166	1178	1015	954	13791
Wounds Dressed	53	41	80	59	83	71	122	111	107	109	76	114	1026
Teeth Extracted.....	12	16	27	22	22	11	7	3	5	5	7	7	144
Special Diets........	476	585	559	447	659	584	567	607	718	479	607	787	7075

TRANSFERRED TO BAY VIEW AND OTHER ASYLUMS.

White Male	....	2	....	....	2	1	....	....	....	....	1	1	7
White Female.......	....	....	....	....	....	....	....	....	....	....	....	....	0
Colored Male........	1	....	3	....	....	1	....	....	....	....	....	....	5
Colored Female	1	....	....	....	1	....	....	....	....	....	....	....	2

CAUSE OF TRANSFER.

Insanity, 11; Tuberculosis, 3.

SUMMARY OF THE MEDICAL DEPARTMENT.—*Concluded.*

DEATHS FOR THE YEAR ENDING DECEMBER 31, 1913.

NAME	Admitted	Date of Death	Cause of Death
*Phillip Gibson	Aug. 27, 1912	Jan. 3, 1913	Strangulation—Legal Execution.
John J. Nash	Feb. 17, 1913	Feb. 19, 1913	Pneumonia and Delirium Tremens.
John Conolly	June 19, 1911	Mar. 13, 1913	Internal injuries and fracture of arm—Accidental.
Benjamin White	April 9, 1913	April 21, 1913	Suicide by hanging.
Thomas F. Ryan.....	May 29, 1913	May 30, 1913	Bright's Disease—Uraemic Coma.
*Stephen Rumsey.....	April 9, 1913	June 4, 1913	Bright's Disease—Pulmonary emphysema.
*Randolph Williams...	April 1, 1913	June 23, 1913	Cellulitis—Seotum and Perineum.
*Mary Watts..........	July 4, 1913	July 7, 1913	Endocarditis—Delirium Tremens.
*Charles Nixon	Sept. 2, 1913	Sept. 17, 1913	Pneumonia—Tubercular.
John Geary	Nov. 9, 1913	Nov. 10, 1913	Bright's Disease and Delirium Tremens.

(*) Colored.

REPORT OF THE PRISONERS' AID ASSOCIATION

BALTIMORE, January 1, 1914.

To the Honorable Board of Visitors to the Baltimore City Jail.

GENTLEMEN:

Herewith we hand you report of the work of the Prisoners' Aid Association of Maryland for year ending December 31, 1913.

On January 1, 1913, our records showed 501 probationers in our care; during the year 850 probationers were granted to us by the judges of the Criminal Courts, making a total of 1,351 probationers in our care for the year ending January 1, 1914 (960 white males, 28 white females, 332 colored males, 31 colored females). The terms of 336 expired and 24 violated their probation conditions and were incarcerated for said violation, leaving a total of 991 probationers at the present time in the Association's care. The reported earnings of our probationers for the year ending January 1, 1914, were $310,782.59.

We interviewed in Baltimore City Jail 2,146 persons in connection with our probation work, taking biographical statements of 663. Six hundred and seventeen cases that we investigated in this way have come before the Criminal Court during the year. During the year we received into our "Home":

Discharged prisoners from Baltimore City Jail	73
Discharged prisoners from Maryland House of Correction	180
Discharged prisoners from Maryland Penitentiary	27
Discharged prisoners from Towson Jail and Federal Prison	19
Probationers	12
Total persons admitted to the "Home"	311

Interviewed in Baltimore City Jail for employment	154
Interviewed in Maryland Penitentiary for employment and investigation	194
Interviewed probationers at "Home" for employment	175
Interviewed firms for employment	115
Employment secured for	110
Number of men now awaiting employment in "Home"	12
Number of men now in "Home"	17
Board and lodging received from beneficiaries of "Home"	$763.05
Families of prisoners visited	38
Miscellaneous visits for prisoners	147
Underwear, clothing, etc., furnished to	276
Eyeglasses furnished to prisoners	52
Meals furnished to beneficiaries	16,084
Lodgings furnished to beneficiaries	4,934
Persons placed in hospitals	7

Number of men leaving the "Home" rehabilitated, 145, as against 124 last year. We know from personal knowledge that these men have returned to their homes or have found employment in the city and have become law-abiding citizens.

Regarding the religious work, services were held Sunday mornings and afternoons at the Baltimore City Jail and in the afternoons at Towson Jail and Maryland House of Correction. These services were conducted by ministers and laymen from all denominations.

We distributed tracts and Bibles as follows:

	Tracts.	Bibles.
Baltimore City Jail	24,346	495
Maryland House of Correction	20,675	855
Towson Jail	1,875	170

Religious interviews with prisoners:

Baltimore City Jail	175
Maryland House of Correction	30
Towson Jail	37
Maryland Penitentiary	13

In conjunction with the Warden, a new departure was made during the year in the character of entertainments given to prisoners; these included moving pictures and band concerts.

Our records show the following charges for actual relief to beneficiaries for the year ending January 1, 1914:

Provisions	$1,408 19
Rent and outside lodgings	555 25
Transportation furnished to discharged prisoners	3 35
Clothing purchased	49 14
Sundry aid and relief	28 91
Sundry expenses in connection with the "Home"	659 11
Lectures, etc., in connection with religious work	115 60

Amount of non-support and embezzlement money collected and paid for the court during the year, $37,226.93 (as against $17,754.55 last year).

We congratulate the Board, the Warden and his assistants upon the work of the year, showing as it does that they are fully abreast of all the best of the new movements looking to the reformation and restoration to true manhood of the unfortunates under their care—many being in that position more through heredity and environment than from any innate viciousness of their own. Our own work along these lines has met in all instances with their most hearty co-operation.

Respectfully submitted,

CHARLES D. REID, *Executive Secretary,*
The Prisoners' Aid Association of Maryland.

ANNUAL REPORT

OF THE

CITY REGISTER

AND THE

COMMISSIONERS OF FINANCE

OF BALTIMORE

To the Members of the First and Second Branches
of the City Council, for the Fiscal Year
Ending December 31, 1913

1797

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER

1914

CITY REGISTER'S DEPARTMENT

CITY REGISTER

RICHARD GWINN

DEPUTY REGISTER

ISAAC L. NEWMAN

CHIEF CLERK

WILLIAM T. GATCHELL

STOCK CLERK and CLERK TO BOARD OF AWARDS

THEODORE A. MASTERMAN

ASSISTANT CLERKS

CHARLES H. MOORE
T. WORTH MURPHY
WALTER R. LYON
EDWARD J. BYRNES

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CITY REGISTER'S REPORT

BALTIMORE, December 31, 1913.

To the Honorable Members of the
First and Second Branches of the City Council.

GENTLEMEN:

Complying with the provisions of the Baltimore City Code of 1893 (Article 11, Section 24), I have the honor to lay before you the following report:

The receipts into the treasury from all sources during the current fiscal year, ended December 31, 1913, as detailed in Statement "C" of this report, were........	$23,378,116 70
To which add the cash balance of December 31, 1912...	2,641,771 52
Making the total amount to be accounted for..........	$26,019,888 22
The total disbursements for the year, as detailed in Statement "C," were..................................	24,381,195 65
Leaving a cash balance on hand, December 31, 1913, of..	$1,638,692 57

FUNDED DEBT ACCOUNT

Net credit balance December 31, 1912	$1,578,932 04	
Net proceeds from sales of stock during the year	7,447,198 16	
Special paving tax	62,317 76	
		$9,088,447 96
Expenditures during year, as shown by Statement "C"		8,427,341 00
Credit balance December 31, 1912		$661,106 96

Funded debt:

The funded debt December 31, 1913, is	$78,917,679 50	
The funded debt December 31, 1912, was	71,294,382 95	
Showing an increase during the year of		$7,623,296 55

Thus explained:

Paving 4% 1951 Loan issued	$1,000,000 00	
Annex Improvement 4% 1951 Loan issued	325,000 00	
Water 4% 1958 Loan issued	1,500,000 00	
Jones Falls Improvement 4% 1961 Loan issued	400,000 00	
School House 4% 1961 Loan issued	80,000 00	
Dock Improvement 4% 1961 Loan issued	170,000 00	
New Sewerage Improvement 4% 1961 Loan issued	3,975,000 00	
Conduit 4% 1962 Loan issued	375,000 00	
General Fund Bonds ¼% issued	300,000 00	
		$8,125,000 00
Less $1,703.45 Five Million 6% 1890 Loan redeemed	$1,703 45	
Less $500,000 Water 4% 1922 Loan redeemed before maturity	500,000 00	
		501,703 45
		$7,623,296 55

FORM OF THE FUNDED DEBT

In my last annual report I referred to the form of obligation which the city has heretofore issued for its funded debt, namely, a registered stock with interest payable by check, and each loan payable in its entirety at some future date, and each requiring an annual sinking fund accumulation for its redemption. The principal object in adhering to a registered certificate has been to avoid the unnecessary payment of the State tax on that part of the city debt held outside of the State.

I pointed out that the remedy should come from legislation, and advocated the abolition of all taxes within the State, on its public debt, or on the public debt of any of its political subdivisions.

Since then, a bill abolishing all such taxes on all such obligations to be hereafter issued, and on all such obligations heretofore issued, upon which the city, county or political subdivision is obligated to pay the State tax on behalf of the holder, has been passed by the Legislature and has become a law. With this relief, I would recommend that the present form of city stock be discontinued in future loans, and that the latter be issued in the form of serial bonds with coupons attached for interest, registerable as to principal only, and only registered upon request. I would further recommend that both bonds and coupons be made payable in English as well as American money at a fixed normal parity, that such be denominated on the face of both bond and coupon, and that all be made payable in gold.

Bonds issued in the form and with the provisions just described would have a much broader market, and would command the highest market price obtainable for such securities, either at home or abroad. Fiscal agents should be appointed if the design is to be effectual.

Serial loans under which a yearly portion of the principal is repaid are usually issued in as many series as the debt has years to run, each year's series containing an equal part of the principal of the loan. This plan has, perhaps because of its simplicity, become usual, but under it the varying interest payments make the total yearly cost (principal and interest), during the early years, before the principal is much reduced, very much larger than the latter years, when the principal is nearly all repaid.

I would recommend, as being more scientific and better financing, a plan under which the total yearly cost would be uniform, but as interest payments must necessarily be larger at first than at last, the desired uniformity must be had by grading the annual payments on account of principal.

The total cost for each of the years cannot be made precisely uniform, because of the even denomination of the bonds, or because it is desirable to have even amounts in the different yearly series, but it can be made as nearly so as the denomination of the bonds or the even amounts in the series will permit, and at most the variation in the total cost for the different years can be made so small as to be unimportant.

This plan can be adapted to a loan, no matter whether issued in whole or in portions, and whether its repayment commences at once or is deferred. Variations of this plan have been comprehensively illustrated in a pamphlet published in 1905 by Mr. Robert M. Rother, comparing partial payments with sinking funds.

Under the old sinking fund plan the disadvantages are numerous and many of them are unavoidable, but it is manifest that no effort to hoard funds to pay a debt could hope to be as successful as the partial payment of the debt at the time the funds available for such redemption are acquired.

In years gone by, we have had the experience of having some of our sinking funds neglected, and in the instance of Water 1916 Loan, shortly to mature, we will be confronted with a deficit of nearly 30 per cent., due to such neglect. This, however, is the only one of those sinking funds which will be short at maturity, the others that were neglected having been replenished.

In connection with the Water 1916 Loan, to which I have referred, I would recommend that all the holders be offered the privilege of continuing the investment, for a term or ten years, on a somewhat lower percentage basis than the 5 per cent. which the loan now pays. It is probable that such an option would be accepted by more than the amount of stock left unprovided for by the sinking fund. If the rate of interest were made somewhat better than the market rate, the extension would probably be in demand, in which event only the exact amount, which the city might find it desirable to extend, need be offered, with the understanding that it would be granted to those first applying. Under this plan the annual contribution for interest and sinking fund for the ensuing ten years would be approximately $125,000 less than at present. If, however, the city should find it necessary to exercise its right of continuing the entire loan, the sinking fund, continued as heretofore, would be sufficient to redeem it in five years.

The sale of city stock, which took place direct to the public over the counter of this Department during the year, and which is more fully described in the report of the Commissioners of Finance of this year, has attracted wide attention, and has apparently given rise to a growing opinion that this method of disposing of municipal securities is preferable to any other.

Communications from many sources indicate that this city is regarded as having adopted this plan. We have had other sales "over the counter" in past years (I believe the plan of selling "over the counter" was originated by the Commissioners of Finance of Baltimore in 1907), and while it has several times been employed, it has not in any other sense been adopted.

There were many features to be considered in the sale of last June, and it is my belief that our experience does not warrant our selling our stock in this way exclusively, but indeed, only when the existing circumstances make it clearly advisable. When there is real and sufficient competition in the bidding, especially when the offering is large, there are many advantages in disposing of the entire amount to the highest bidder, and under normal and proper conditions it would probably be more economical. The factors and circumstances entering into these sales are so varying at different times as to make impractical any standard method of selling.

The statements herewith submitted for your information are as follows:

"A"—An analysis of the funded debt.

Supplement—Showing sources from which interest and sinking funds are derived.

"B"—Statement of the financial condition.

"C"—A statement in detail of the receipts and expenditures for the fiscal year, with the appropriations for the various accounts.

"D"—A statement of the fund held by the City Register in trust for property sold for taxes.

"E"—A statement of the fund held by the City Register in trust for unclaimed damages for opening streets.

Respectfully submitted,

RICHARD GWINN,
City Register.

SUPPLEMENT—STATEMENT A.

TABULATION OF LOANS OUTSTANDING, JANUARY 1, 1914, SHOWING SOURCES FROM WHICH INTEREST AND SINKING FUNDS ARE DERIVED

NAME OF LOAN	Interest Rate, Per Cent.	Date	Term	Maturity of Loan.	Amount of Loan.	Amount Issued	Sinking Fund Tax Rate.	Interest, 1913,		Basis of Sinking Fund, Per Cent.	Paid by Tax Levy.	Paid by Water Board.	Paid by Park Board.	Paid by Certificates of Deposit
McDonogh Extension 1916 Loan	5	1890	25 years	Sept. 1, 1916	$280,000 00	$280,000 00	*General Sinking Fund.	$14,000 00	Sinking Fund.					
									Interest		$14,000 00			
Funding 1916 Loan	5	1878	40 years	July 1, 1916	1,000,000 00	1,000,000 00	*General Sinking Fund..	50,000 00	Sinking Fund					
									Interest		50,000 00			
Water 1916 Loan	5	1877	40 years	July 1, 1916	5,000,000 00	5,000,000 00	2 cents	250,000 00	Sinking Fund.		74,014 00			
									Interest			$250,000 00		
Paving 1920 Loan	4	1880	40 years	Nov. 1, 1920	500,000 00	500,000 00	*General Sinking Fund.	20,000 00	Sinking Fund					
									Interest		20,000 00			
Patterson Park Extension 1920 Loan	4	1882	40 years	Oct. 1, 1920	200,000 00	200,000 00	*General Sinking Fund..	8,000 00	Sinking Fund					
									Interest				$8,000 00	
Harford Run 1920 Loan	4	1879	40 years	Jan. 1, 1920	250,000 00	250,000 00	*General Sinking Fund.	10,000 00	Sinking Fund					
									Interest		10,000 00			
Conduit 1922 Loan	3½	1896	25 years	Jan. 1, 1922	1,000,000 00	1,000,000 00	1 cent	35,000 00	Sinking Fund..		37,007 00			
									Interest		35,000 00			
W. M. R. R. 1925 Loan	4	1882	40 years	July 1, 1925	684,000 00	684,000 00	None from taxes	27,360 00	Sinking Fund..					Completed.
									Interest					$27,360 00
Water 1926 Loan	4	1886	40 years	Nov. 1, 1926	1,000,000 00	1,000,000 00	1 cent	40,000 00	Sinking Fund...		Completed.			
									Interest			40,000 00		
W. M. R. R. 1927 Loan	3¼	1886	40 years	Jan. 1, 1927	1,704,000 00	1,704,000 00	None from taxes	55,380 00	Sinking Fund..					Completed.
									Interest					55,380 00
Internal Improvement 1928 Loan	3½	1888	40 years	July 1, 1928	4,850,000 00	4,850,000 00	3 cents	169,750 00	Sinking Fund...		111,021 00			
									Interest		169,750 00			
Conduit 1928 Loan	3½	1902	25 years	Jan. 1, 1928	1,000,000 00	1,000,000 00	1 cent	35,000 00	Sinking Fund.		37,007 00			
									Interest		35,000 00			
Consolidated 1930 Loan............	3½	1890	40 years	July 1, 1930	5,000,000 00	5,000,000 00	*General Sinking Fund..	175,000 00	Sinking Fund..		*			
									Interest		175,000 00			
Funding 1936 Loan	3½	1896	40 years	July 1, 1936	1,453,300 00	1,453,300 00	1 cent	50,865 50	Sinking Fund		37,007 00			
									Interest		50,865 50			
Refunding 1940 Loan	3½	1898	50 years	Jan. 1, 1940	4,300,000 00	4,300,000 00	2 cents	150,500 00	Sinking Fund		74,014 00			
									Interest		150,500 00			
Public Improvement 1940 Loan	3½	1892	50 years	Jan. 1, 1940	6,000,000 00	6,000,000 00	2 cents	210,000 00	Sinking Fund		74,014 00			
									Interest		210,000 00			
Water 1943 Loan	3½	1903	40 years	Jan. 1, 1943	1,000,000 00	1,000,000 00	None from taxes	35,000 00	Sinking Fund.			21,614 00		
									Interest			35,000 00		
Four Million 1945 Loan	3½	1895	50 years	Mar. 1, 1945	4,000,000 00	4,000,000 00	½ cent	140,000 00	Sinking Fund		18,554 00		29,042 00	
									Interest		35,000 00	70,000 00	35,000 00	
W. M. R. R. Refunding 1950 Loan	3½	1898-1900	50 years	Mar. 1, 1950	875,000 00	875,000 00	None from taxes	30,625 00	Sinking Fund					Completed.
									Interest					30,625 00
Paving 1951 Loan	4	1911	40 years	Aug. 1, 1951	5,000,000 00	2,500,000 00	Rate to produce	72,516 00	Sinking Fund	3½	59,000 00			
									Interest		200,000 00			
Annex Improvement 1951 Loan	4	1911	40 years	Aug. 1, 1951	2,500,000 00	725,000 00	Rate to produce	22,294 00	Sinking Fund...	3	29,500 00			
									Interest		100,000 00			
W. M. R. R. Refunding 1952 Loan	3½	1898-1900	50 years	Jan. 1, 1952	1,000,000 00	1,000,000 00	None from taxes	35,000 00	Sinking Fund...					Completed.
									Interest					35,000 00
Annex Improvement 1954 Loan	4	1905	50 years	June 1, 1954	2,000,000 00	2,000,000 00	Rate to produce	80,000 00	Sinking Fund...	3	17,500 00			
									Interest		80,000 00			
Burnt District 1954 Loan.	3½	1904	50 years	June 1, 1954	6,000,000 00	6,000,000 00	2 cents	210,000 00	Sinking Fund...		74,014 00			
									Interest		210,000 00			
Public Park Improvement 1955 Loan	4	1905	50 years	May 1, 1955	1,000,000 00	1,000,000 00	None from taxes	40,000 00	Sinking Fund...	3			8,800 00	
									Interest				40,000 00	
General Fund Bonds 1955 Loan	¼	1910	45 years	Mar. 1, 1955	3,000,000 00	900,000 00	None	1,875 00	Sinking Fund...		None.			
									Interest		7,500 00			
New School House 1957 Loan	4	1907	50 years	June 1, 1957	1,000,000 00	1,000,000 00	Rate to produce	40,000 00	Sinking Fund...	3	8,800 00			
									Interest		40,000 00			
New Engine House 1957 Loan	4	1907	50 years	June 1, 1957	1,000,000 00	1,000,000 00	Rate to produce	40,000 00	Sinking Fund...	3	8,800 00			
									Interest		40,000 00			
Water 1958 Loan	4	1908	50 years	Dec. 1, 1958	5,000,000 00	2,100,000 00	Rate to produce.	53,968 00	Sinking Fund...	3½	38,000 00			
									Interest		200,000 00			
Conduit 1958 Loan	4	1908	50 years	Dec. 1, 1958	1,000,000 00	1,000,000 00	Rate to produce.	40,000 00	Sinking Fund...	3	7,600 00			
									Interest		40,000 00			
Burnt District 1960 Loan	4	1909	50 years	April 1, 1960	1,000,000 00	†685,000 00	Rate to produce.	27,400 00	Sinking Fund	3	7,600 00			
									Interest		27,400 00			
New Sewerage Improvement 1961 Loan	4	1911	50 years	Aug. 1, 1961	10,000,000 00	5,975,000 00	Rate to produce	118,302 00	Sinking Fund	3	76,000 00			
									Interest		400,000 00			
Jones Falls 1961 Loan	4	1911	50 years	Mar. 1, 1961	1,000,000 00	700,000 00	Rate to produce	19,120 00	Sinking Fund...	3	7,600 00			
									Interest		40,000 00			
School House 1961 Loan	4	1910	50 years	Mar. 1, 1961	1,500,000 00	800,000 00	Rate to produce	32,990 00	Sinking Fund..	3	11,400 00			
									Interest		60,000 00			
Dock Improvement 1961 Loan	4	1910	50 years	Mar. 1, 1961	2,000,000 00	970,000 00	Rate to produce.	33,360 00	Sinking Fund	3	15,200 00			
									Interest		80,000 00			
Conduit 1962 Loan	4	1912	50 years	Aug. 1, 1962	2,000,000 00	375,000 00	Rate to produce.	4,096 00	Sinking Fund	3	15,200 00			
									Interest		80,000 00			
New Sewerage Improvement 1980 Loan	3½	1905	75 years	Oct. 1, 1980	10,000,000 00	10,000,000 00	Rate to produce	350,000 00	Sinking Fund...	3	37,000 00			
									Interest		350,000 00			
Unredeemed stock, no interest allowed						91,679 50	*General Sinking Fund..	None.	Sinking Fund					
									Interest		None.			
General Sinking Fund							1½ cents		Sinking Fund..		64,762 00			
Totals					§$96,096,300 00	$78,917,979 50		§$2,727,401 50			$3,850,629 50	$416,614 00	$120,842 00	$148,365 00

*Provided for in the General Sinking Fund.

†The remaining $315,000 of this loan will probably not be issued.

§Interest on $500,000 Water 1922 4% Loan (redeemed December 31, 1913) not included.

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STATEMENTS

STATEMENT A—FUNDED DEBT.

December 31, 1913.

Name of Loan.	Rate.	Authority for Issue.	When Redeemable.	Amount Issued.
Water	5 %	Ord. No. 65, 1877	On or after July 1, 1916	$5,000,000 00
Funding	5 %	" 93, 1878	At pleasure after July 1, 1916	1,000,000 00
McDonogh Ext'n.	5 %	" 157, 1890	Sept. 1, 1916	280,000 00
Harford Run	4 %	" 86, 1879	At pleasure after Jan. 1, 1920	250,000 00
Patterson Pk Ext'n	4 %	" 120, 1882	Oct. 1, 1920	200,000 00
Paving	4 %	" 140, 1880	At pleasure after Nov. 1, 1920	500,000 00
W. M. R. R.	4 %	" 71, 1882	July 1, 1925	684,000 00
Water	4 %	" 82, 1886	At pleasure on or after Nov. 1, 1926	1,000,000 00
Paving	4 %	" 661, 1911	Aug. 1, 1951	2,500,000 00
Annex Impvt.	4 %	" 662, 1911	Aug. 1, 1951	725,000 00
Annex Impvt.	4 %	" 216, 1905	June 1, 1954	2,000,000 00
Pub. Pk. Impvt.	4 %	" 228, 1905	May 1, 1955	1,000,000 00
New Eng. House	4 %	" 239, 1907	June 1, 1957	1,000,000 00
New Schl. House	4 %	" 240, 1907	June 1, 1957	1,000,000 00
Conduit	4 %	" 142, 1908	Dec. 1, 1958	1,000,000 00
Water	4 %	" 141, 1908	Dec. 1, 1958	2,100,000 00
Burnt Dist Impvt.	4 %	" 391, 1909	April 1, 1960	685,000 00
Jones Falls Impvt.	4 %	" 555, 1910	Mar. 1, 1961	700,000 00
School House	4 %	" 556, 1910	Mar. 1, 1961	890,000 00
Dock Impvt.	4 %	" 557, 1910	Mar. 1, 1961	970,000 00
New Sew. Impvt.	4 %	" 653, 1911	Aug. 1, 1961	5,975,000 00
Conduit	4 %	" 162, 1912	Aug. 1, 1962	375,000 00
Conduit	3½%	" 120, 1896	Jan. 1, 1922	1,000,000 00
Conduit	3½%	" 87, 1902	Jan. 1, 1928	1,000,000 00
Internal Impvt.	3½%	" 98, 1888	July 1, 1928	4,850,000 00
Consolidated	3½%	" 58, 1890	At pleasure after July 1, 1930	5,000,000 00
Funding	3½%	" 112, 1896	July 1, 1936	1,453,300 00
Public Impvt.	3½%	" 100, 1892	Jan. 1, 1940	6,000,000 00
Refunding	3½%	" 32½, 1898	Jan. 1, 1940	4,300,000 00
		Amount carried	*forward*	$53,437,300 00

STATEMENT A—FUNDED DEBT—*Continued.*

Name of Loan.	Rate.	Authority for Issue.	When Redeemable.	Amount Issued.
		Amount brought	*forward*.......	$53.437.300 00
Water	3½%	Ord. No. 86, 1902	At pleasure on or after Jan. 1, 1943	1,000,000 00
Four Million.....	3½%	" 137, 1894	Mar. 1, 1945	4,000,000 00
W. M. R. R. Refg.	3½%	" 18, 1898 " 32, 1900	Mar. 1, 1950	875,000 00
W. M. R. R. Refg.	3½%	" 18, 1898 " 32, 1900	Jan. 1, 1952	1,000,000 00
Burnt Dist. Impvt.	3½%	" 71, 1904	June 1, 1954	6,000,000 00
New Sew. Impvt.	3½%	" 227, 1905	Oct. 1, 1980	10,000,000 00
W. M. R. R.....	3¼%	" 11, 1886	Jan. 1, 1927	1,704,000 00
Gen. Fund Bonds.	¼%	" 564, 1910	Mar. 1, 1955	900,000 00
Stock due in 1860	6 %	Unredeemed,	no int. allow'd	482 00
Water Stock due in 1875.........	6 %	"	" "	270 00
Consolidat'd Stock due in 1890....	6 %	"	" "	427 50
Five Million Stock due in 1890....	6 %	"	" "	200 00
		Total Funded Debt........		$78,917.679 50

STATEMENT B.

Funded Debt, Productive and Unproductive Assets.

Total funded debt December 31, 1913		$78,917,679 50
Temporary loan from national banks on the several promissory notes of the Mayor and City Council in anticipation of receipts from taxes	$500,000 00	
Accrued interest to December 31, 1913, at 4½%	250 00	
Accrued interest to December 31, 1913, at 5%	375 00	
		500,625 00
		$79,418,304 50

Against which the city holds the following productive assets:

Sinking funds, face value	$26,036,750 17	
Water works stock outstanding	11,100,000 00	
Electrical conduit system	3,375,000 00	
New docks and piers	6,105,000 00	
550 shares Baltimore and Reisterstown Turnpike stock (dividend paying)	412 50	
		46,617,162 67
Excess of funded debt over productive assets		$32,801,141 83

UNPRODUCTIVE ASSETS.

10,000 shares Valley Railroad of Virginia stock	
625 shares Baltimore and York Turnpike stock	
New Court House, cost	$2,750,000 00
City Hall, cost	2,250,000 00
Market and school houses, jail, police stations, engine houses, iceboats, Quarantine Station, parks and squares	15 000,000 00
	$20,000,000 00

Of the total funded debt amounting to		$78,917,679 50
Interest is provided as follows:		
On Water 5% 1916 Loan, paid from water rents	$5,000,000 00	
On Water 4% 1926 Loan, paid from water rents	1,000,000 00	
On Water 3½% 1943 Loan, paid from water rents	1,000,000 00	
On Four Million 3½% 1945 Loan (issued for extension of water supply), paid from water rents	2,000,000 00	
On Patterson Park 4% 1920 Loan, paid from Park Board receipts	200,000 00	
On Four Million 3½% 1945 Loan (issued for park purposes), paid from Park Board receipts	1,000,000 00	
On W. M. R. R. 3½% 1952 Loan, paid by Commissioners of Finance from special sinking fund	1,000,000 00	
On W. M. R. R. 4% 1925 Loan, paid by Commissioners of Finance from special sinking fund	684,000 00	
On W. M. R. R. 3¼% 1927 Loan, paid by Commissioners of Finance from special sinking fund	1,704,000 00	
On W. M. R. R. 3½% Loan, paid by Commissioners of Finance from special sinking fund	875,000 00	
Amounts carried forward	$14,463,000 00	$78,917,679 50

Amounts brought forward	$14,463,000 00	$78,917,679 50
On Public Park Improvement 4% 1955 Loan, paid from Park Board receipts	1,000,000 00	
Overdue stock, no interest allowed	1,379 50	
		15,464,379 50
Leaving the amount on which interest is provided for by taxation at		$63,453,300 00

Viz:	$1,280,000 00	interest at 5%.
	20,670,000 00	interest at 4%.
	40,603,300 00	interest at 3½%.
	900,000 00	interest at ¼%.
	$63,453,300 00	

STATEMENT C.

NAMES OF ACCOUNTS.	Appropriations.	Face of Ledger.		Receipts from Collector of Taxes.	Receipts from Other Sources.
		Dr.	Cr.		
Board of Park Commissioners.					
Board of Park Commissioners, Receipts			$592,462 48		$592,462 48
Board of Park Commissioners, Office Salaries	$5,288 00	$5,266 81			
Board of Park Commissioners, Office Expenses	2,000 00	1,912 13			
Parks and Squares, Salaries	245,549 50	240,201 88			
Parks and Squares, Expenses	274,538 00	269,020 06			
Parks and Squares, New Improvements	73,624 50	19,079 75			
Purchase of Property for Addition to Gwynn's Falls Park	36,000 00	36,000 00			
Extension Park System, etc., Southwest Section	27,415 95	4,656 90	1,200 00		1,200 00
Extension Park System, etc., Northeast Section	18,936 15				
Extension Park System, etc., Southeast Section	73,059 17	63,056 27			
	$756,411 27	$639,193 80	$593,662 48		$593,662 48

COLLECTOR OF WATER RENTS AND LICENSES.					
Water Board Receipts	......	$3,958 43	$1,485,903 56	......	$1,485,903 56
Collector of Water Rents and Licenses, Salaries	$30,220 00	29,836 67	......	......	......
Collector of Water Rents and Licenses, Expenses	2,055 00	2,034 43	......	......	......
Interest on Water Loans	415,000 00	415,000 00	......	......	......
Sinking Fund on Water 1943 Loan	22,500 00	21,614 43	......	......	......
Water Board, Meters	......	8,372 11	7,099 52	......	7,099 52
	$469,775 00	$480,816 07	$1,493,003 08	......	$1,493,003 08
WATER ENGINEER'S DEPARTMENT.					
Water Engineer's Department, Salaries	$106,920 00	$101,293 47	$43 33	......	$43 33
Water Engineer's Department, Expenses	536,770 00	537,121 57	1,916 11	......	1,916 11
Work to be Done in Advance of Improved Paving	93,000 00	147,829 71	......	......	......
Auxiliary Pumping Station at Lake Ashburton	10,500 00	......	......	......	......
Cleaning Mains in Advance of Filtration	15,000 00	401 47	......	......	......
Pitometer Survey for Underground Leaks	5,000 00	5,474 76	472 46	......	472 46
Repairs to Pumping Station	31,700 00	3,977 89	......	......	......
	$798,890 00	$796,098 87	$2,431 90	......	$2,431 90

STATEMENT C.—*Continued.*

NAMES OF ACCOUNTS.	Appropriations.	Face of Ledger.		Receipts from Collector of Taxes.	Receipts from Other Sources.
		Dr.	Cr.		
General Licenses	$2,100 00	$5,348 78	$09,017 20	....	$99,017 20
Belair Market	....	63 05	8,636 55	....	8,636 55
Canton Market	....	20 55	418 50	....	418 50
Centre Market	....	1,786 22	1,503 00	....	1,503 00
Cross Street Market	....	26 57	4,116 78	....	4,116 78
Fells Point Market	....	54 28	4,332 00	....	4,332 00
Hanover Market	....	45 97	1,419 67	....	1,419 67
Hollins Market	....	55 42	3,330 77	....	3,330 77
Lafayette Market	....	30 66	2,533 20	....	2,533 20
Lexington Market	....	298 39	13,899 45	....	13,899 45
Northeast Market	....	21 35	3,716 90	....	3,716 90
Richmond Market	....	90 54	2,004 30	....	2,004 30
Wholesale Produce Market	....	....	4,000 00	....	4,000 00
Wholesale Fish Market	....	....	10,100 00	....	10,100 00
Cross Street Hall	....	185 23	172 00	....	172 00
Fines	....	95 50	6,506 17	....	6,506 17
Interest on Deposits	....	....	65,751 00	....	65,751 00
Public Franchises and Minor Privileges	....	344 00	35,713 41	....	35,713 41
Wharfage	....	11,156 11	55,169 72	....	55,169 72
Dog Licenses and Fines	....	14,946 60	24,003 71	....	24,003 71
	$2,100 00	$34,569 22	$346,344 33	....	$346,344 33

Inspector of Buildings.

Repairs to City Property	$161,700 00	$166,759 42	$17 02		$17 02
Salaries	60,360 00	60,072 03			
Emptying Cesspools	300 00	330 85			
Livery and Transportation	1,800 00	1,711 00			
Incidentals	400 00	399 19			
Contingencies	20,000 00	14,526 75			
Public Comfort Stations in Markets	10,000 00	4,995 60			
Municipal Garage	4,500 00	4,503 12	3 12		3 12
*Supplying Heat and Light from High Pressure Pumping Station to City Hall and Court House		18,389 21			
*Boiler, No. 1 Bath House		311 00			
*Additional Room and Sanitary Improvements, City Hall		2,003 70			
Lot and Building, Polytechnic Institute	200,000 00	200,000 00			
School No. 22	963 39	963 39			
	$460,023 39	$474,965 26	$20 14		$20 14

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*Paid out of unexpended balances, 1912.

STATEMENT C.—*Continued.*

NAMES OF ACCOUNTS.	Appropriations.	Face of Ledger.		Receipts from Collector of Taxes.	Receipts from Other Sources.
		Dr.	Cr.		
Commissioner of Street Cleaning.					
Salaries	$26,840 00	$26,549 37			
Street Carts and Men	140,400 00	129,083 20			
Sweepers and Scrapers	212,628 00	188,672 04			
Sweeping Machines and Sprinklers	63,634 00	52,860 08			
Cleaning Sewers and Inlets	37,368 00	33,589 20			
Tools and Repairs	8,085 00	6,490 40			
Incidentals	2,720 00	1,646 64			
Removal of Garbage	66,500 00	66,500 00			
Collection of Ashes and Garbage	227,483 22	220,902 27			
Removal and Disposal of Waste	25,000 00	29,927 44			
Emergency Fund	10,000 00				
Destruction of Weeds and Grass	2,000 00	934 00			
Sales of Refuse			$6,398 97		$6,398 97
	$822,658 22	$757,154 64	$6,398 97		$6,398 97

Supt. of Lamps and Lighting.

Salaries	$16,788 00	$16,506 51			
Gas Lighting and Maintenance	179,742 60	179,414 75			
Electric Lights and Maintenance	257,785 41	258,110 72	$346 86		$346 86
Naphtha Lamps and Maintenance	9,312 00	8,088 23			
Incidentals	350 00	350 00			
Revenue			80 06		80 06
	$463,978 01	$462,470 21	$426 92		$426 92

Harbor Board.

Salaries	$6,130 00	$5,669 84			
Dredging Harbor	55,277 00	56,144 54	$867 55		$867 55
Iceboats	23,430 00	24,096 31	5,048 00		5,048 00
Repairs to Wharves	7,300 00	9,079 11	1,779 75		1,779 75
Light Street Bridge	16,619 00	16,756 62	172 25		172 25
Removal of Ashes	1,100 00	614 50			
Removal of Floating Matter	1,935 00	1,774 42			
Incidentals	500 00	395 17			
Revenue			88 47		88 47
	$112,291 00	$114,530 51	$7,956 02		$7,956 02

STATEMENT C.—*Continued.*

NAMES OF ACCOUNTS.	Appropriations.	Face of Ledger.		Receipts from Collector of Taxes.	Receipts from Other Sources.
		Dr.	Cr.		
Commissioner of Health.					
Salaries	$135,380 00	$134,602 89			
Expenses	40,321 37	40,311 17	$1 84		$1 84
Abatement of Nuisances	1,873 64	1,873 64	1,535 24		1,535 24
Tuberculosis Dispensary	6,000 00	5,988 56			
Sydenham, Salaries	10,160 00	9,612 68			
Sydenham, Expenses	10,650 00	10,650 00			
Quarantine, Salaries	14,489 64	14,256 70	1 96		1 96
Quarantine, Expenses	13,550 00	13,286 24	239 55		239 55
Sydenham Hospital, Revenue			939 68		939 68
Quarantine, Tonnage Tax			20,879 56		20,879 56
Health Department, Revenue			1,306 70		1,306 70
	$232,424 65	$230,581 88	$24,904 53		$24,904 53

BOARD OF FIRE COMMISSIONERS.

Salaries	$764,335 00	$751,932 03			
Expenses	194,050 00	197,902 94	$3,852 94		$3,852 94
Pensions, Firemen's Widows	5,425 00	5,187 36			
Fireboat Cataract	65,000 00	46,302 61			
Tractors	16,000 00	9,375 00			
Chases	30,000 00	29,194 14			
Hydrant Heads	5,775 00	5,775 00			
Repair Shop	4,000 00	4,000 00			
Automobiles	6,000 00	6,000 00			
Creating of Truck Co. No. 15	7,425 00	7,191 11			
Extra Work, Pumping Station	15,559 32	14,538 82			
Boiler, High Pressure	15,000 00	15,000 00			
Sale of Old Material			2,830 46		2,830 46
	$1,128,569 32	$1,092,399 01	$6,683 40		$6,683 40

CITY COLLECTOR.

Salaries	$74,900 00	$74,611 80			
Expenses	6,700 00	6,700 00			
Appeal Tax Court, Salaries	67,600 00	67,048 29			
Appeal Tax Court, Expenses	2,535 00	2,535 00			
Tax Sales		1,284 88	$1,526 20		$1,526 20
	$151,735 00	$152,179 97	$1,526 20		$1,526 20

STATEMENT C.—*Continued.*

NAMES OF ACCOUNTS.	Appropriations.	Face of Ledger.		Receipts from Collector of Taxes.	Receipts from Other Sources.
		Dr.	Cr.		
City Engineer.					
Salaries	$43,880 00	$39,769 63	$50 00		$50 00
Livery and Transportation	3,500 00	3,500 00			
Incidentals	1,000 00	999 53			
Advertising	300 00	243 40			
Maintenance of Property Yard	2,800 00	2,782 69			
Footway Crossings	1,000 00	624 12			
Paving and Repaving Cross Streets	45,000 00	44,843 12	10		10
Improvements in and Additions to Drainage System	24,000 00	19,361 73	449 06		449 06
Paving and Repaving Roads, Streets, etc.	307,050 00	319,106 27	4,126 25		4,126 25
Repairs of Sewers	15,000 00	14,614 00	92 56		92 56
Maintenance of Bridges and Culverts	18,000 00	25,151 49	237 11		237 11
Grade Establishments	5,000 00	5,474 79	1,783 02		1,783 02
Paving Private Alleys	3,000 00	5,403 00	3,738 37	$3,504 73	233 64
Emergency Fund	10,000 00	1,489 62	1,489 62		1,489 62
City Forester, Expenses	5,000 00	5,053 59	63 55		63 55
*New Sewerage Connections		237,012 01	19 64		19 64
Encasing Lower Members of Calvert Street Bridge	7,000 00	7,000 00			
Paving Mulberry Street, Saratoga Street and Pulaski Street	5,000 00	2,460 71			

Improvement on Baker Street	1,090 00				
Regrading, etc., Madison Street (Ord. 125, 1912)	2,593 97	2,557 91			
Regrading, etc., Garrett Street (Ord. 133, 1912)	2,600 00	2,500 00			
*Railroad Siding, Bay View Asylum		3,822 81			
*Private Paving and Inspection		259,993 69	247,025 87		247,025 87
Paving Private Footways		11,586 72	3,476 18	3,044 99	431 19
Regrading and Repaving Howard Street	25,000 00	23,704 27			
Laying Dust and Preserving Macadam Roads	12,000 00	11,793 39			
*Underpinning Buildings, Howard, Street, Eutaw Street, etc.		11 00			
Sales of Old Material		154 00	9,663 57		9,663 57
	$539,813 97	$1,051,013 49	$272,214 90	$6,549 72	$265,665 18
COMMISSIONERS FOR OPENING STS.					
Salaries	$9,900 00	$9,860 00			
Expenses	500 00	487 44			
	$10,400 00	$10,347 44			

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*Paid out of unexpended balances, 1912.

STATEMENT C.—*Continued.*

NAMES OF ACCOUNTS.	Appropriations.	Face of Ledger.		Receipts from Collector of Taxes.	Receipts from Other Sources.
		Dr.	Cr.		
Liquor License Commission.					
Salaries	$13,625 00	$13,625 00	$25 00		$25 00
Expenses	3,300 41	3,323 41			
Receipts from Liquor Licenses			996,516 31		996,516 31
	$16,925 41	$16,948 41	$996,541 31		$996,541 31
Supervisors of Elections.					
Salaries	$15,000 00	$15,000 00			
Expenses	3,461 00	3,461 00			
Registration, Fall	49,990 00	49,990 00			
Primary Election, Fall	33,710 00	33,710 00			
General Election, Fall	33,810 00	33,779 58			
Revenue			$3,840 00		$3,840 00
	$135,971 00	$135,940 58	$3,840 00		$3,840 00

CITY LIBRARIAN.					
Salaries	$5,272 00	$5,271 16			
Expenses	25,550 00	24,250 28			
Revenue			$94 00		$94 00
	$30,822 00	$29,521 44	$94 00		$94 00
SUPT. OF PUBLIC BUILDINGS.					
City Hall, Salaries	$17,660 00	$17,622 50			
City Hall Annex, Salaries	6,120 00	6,120 00			
Court House, Salaries	32,940 00	32,940 00			
People's Court, Salaries	2,880 00	2,880 00			
City Hall, Expenses	6 200 00	6,200 00			
City Hall Annex, Expenses	7,250 00	7,250 00			
Court House, Expenses	6,100 00	6,429 41	$329 41		$329 41
People's Court, Expenses	2,625 00	2,625 00			
Revenue			144 56		144 56
	$81,775 00	$82,066 91	$473 97		$473 97
DIARY CITY COUNCIL.					
Salaries	$47,750 00	$47,496 19			
Expenses	12,061 58	12,061 58			
	$59,811 58	$59,557 77			

STATEMENT C.—*Continued.*

NAMES OF ACCOUNTS.	Appropriations.	FACE OF LEDGER.		Receipts from Collector of Taxes.	Receipts from Other Sources.
		DR.	CR.		
MAYORALTY.					
Salaries	$12,000 00	$12,030 56	$41 67		$41 67
Expenses	7,927 17	7,927 17			
	$19,927 17	$19,957 73	$41 67		$41 67
CITY REGISTER.					
Salaries	$13,700 00	$13,551 67			
Expenses	1,390 00	1,401 45	$16 43		$16 43
State Tax on City Loans	101,871 28	96,754 05	985 55		985 55
Advertising Laws	2,000 00	776 93			
Commissioners of Finance, Expenses	4,500 00	4,466 42			
Ground Rents, City Property	45,000 00	43,707 22			
Interest on Stock Debt	2,700,655 47	2,747,484 73	90,601 17		90,601 17
*Unpaid Interest on Stock Debt		734 25			
City Seal			54 35		54 35
Deposits to Secure Purchase of City Stock		72,281 00	72,281 00		72,281 00
	$2,860,116 75	$2,981,157 72	$163,938 50		$163,938 50

COMPTROLLER.					
Salaries	$16,900 00	$16,855 66	......	......	......
Expenses	2,975 97	2,975 97	......	......	......
Assistant Market Masters	6,400 00	6,400 00	......	......	......
Market Cleaners and Employees	9,100 00	8,073 50	......	......	......
Inspectors of Weights and Measures, Salaries	7,200 00	7,200 00	......	......	......
Insurance on City Property	10.000 00	7,545 53	$44 70	......	$44 70
Hose for Various Markets	600 00	540 92	......	......	......
Inspectors of Weights and Measures, Expenses	1,350 00	1,265 13	......	......	......
	$54,525 97	$50,856 71	$44 70	......	$44 70
LAW DEPARTMENT.					
Salaries	$23,800 00	$23,729 01	......	......	......
Expenses	6,000 00	3,328 08	......	......	......
Judgments and Suits	18,000 00	11.661 63	$311 80	......	$311 80
	$47,800 00	$38,718 72	$311 80	......	$311 80
TOPOGRAPHICAL SURVEY.					
Salaries	$13,260 00	$13,164 42	......	......	......
Expenses	2,665 00	2,665 00	......	......	......
Revenue	......	......	$4,147 52	......	$4,147 52
	$15,925 00	$15,829 42	$4,147 52	......	$4,147 52

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*Paid out of unexpended balances, 1912.

STATEMENT C.—*Continued.*

NAMES OF ACCOUNTS.	Appropriations.	Face of Ledger.		Receipts from Collector of Taxes.	Receipts from Other Sources.
		Dr.	Cr.		
Department Legislative Reference.					
Salaries	$3,140 00	$3,140 00			
Expenses	550 00	489 25			
	$3,690 00	$3,629 25			
Free Bath Commission.					
Salaries	$45,436 00	$45,341 17			
Expenses	27,017 00	27,017 00			
*Bath House and Comfort Station, Northeast Baltimore		792 89	$400 00		$400 00
Addition to Gwynn's Falls Pool	7,000 00	7,000 00			
Revenue			22,229 84		22,229 84
	$79,453 00	$80,151 06	$22,629 84		$22,629 84

MISCELLANEOUS.

Public Service Commission, Salaries.	$8,800 00	$8,633 29			
W. H. War	260 00	260 00			
City Surveyor	240 00	240 00			
Coroners	9,000 00	9,000 00			
Contingent Fund........$50,000 00					
Less Transfers........ 41,270 89	8,729 11	6,966 01			
Habitual Drunkards	4,300 00	4,250 50			
Board of Estimates	5,500 00	4,892 65			
Muncipal Telephone Exchange	15,358 00	18,844 44	$4,187 16		$4,187 16
Transportation to House of Correction	500 00	371 46			
Special Medical Examinations	700 00	615 00			
Operating and Maintaining Conduits	10,700 00	10,699 90			
Public Service Commission, Revenue			752 93		752 93
Enoch Pratt Free Library, Equipment and Maintenance	36,500 00	36,500 00			
Enoch Pratt Free Library, City Register	4,258 00	4,258 00			
Lottie C. Curry	300 00	300 00			
Mary A. McGraw	400 00	400 00			
Auditing City Departments	8,500 00	8,000 00			
Maryland School for Blind	75,131 25	75,131 25			
	$189,176 36	$189,362 50	$4,940 09		$4,940 09

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*Paid out of unexpended balances, 1912.

STATEMENT C.—*Continued.*

NAMES OF ACCOUNTS.	Appropriations.	Face of Ledger.		Receipts from Collector of Taxes.	Receipts from Other Sources.
		Dr.	Cr.		
Board of School Commissioners.					
Office Salaries	$9,200 00	$9,200 00			
Day School Salaries	1,017,123 00	1,616,786 73	$65 33		$65 33
Night School Salaries	21,321 00	21,315 30			
Office Expenses	1,500 00	1,500 00			
Night School Expenses	4,500 00	4,500 00			
Day School Expenses	160,650 00	160,650 00			
Free Text Books		56,251 22	57,171 76		57,171 76
Parental School	7,000 00	7,000 00			
Teachers' Retirement Fund	9,100 00	9,100 00			
*Equipping New Building	21,250 00	38,665 49			
*State High School Fund		12,754 33	10,000 00		10,000 00
Vacuum and Cleaning Operation					
*Improved Drinking Fountains		759 60			
Conducting Vacation Classes	6,000 00	6,000 00			
Tuition Fees		86 81	17,334 63		17,334 63
Fund from State of Maryland			515,361 91		515,361 91
*Intestate Estates		2,222 62	66 24		66 24
	$1,857,644 00	$1,946,792 10	$599,999 87		$599,999 87

BOARD OF POLICE COMMISSIONERS.					
Salaries	$1,200,522 47	$1,191,382 22			
Expenses	65,125 00	63,635 67			
*Pensioners	48,531 03	51,099 79			
Examiners' Salaries	4,800 00	4,800 00			
Examiners' Expenses	1,302 00	921 50			
	$1,320,280 50	$1,311,839 18			
SUPERVISORS CITY CHARITIES.					
Salaries	$8,860 00	$8,720 00			
Expenses	1,600 00	1,597 89			
Care of Insane	171,500 00	159,862 03			
City Patients in Hospitals	75,379 00	69,672 46			
Destitute and Neglected Children	25,000 00	20,513 37			
Dispensary Service	10,500 00	10,250 13			
Temporary Care of Homeless Men	2,000 00	1,990 00			
Transportation of the Poor to Their Homes	1,000 00	510 73			
Bay View Asylum, Salaries	67,378 00	61,280 73	$7 50		$7 50
Bay View Asylum, Expenses	155,589 00	155,594 55	5 55		5 55
Board of Destitute Children			130 00		130 00
Bay View Revenue			724 03		724 03
Board of Insane Patients			18,214 91		18,214 91
	$518,806 00	$489,991 89	$19,081 99		$19,081 99

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*Paid out of unexpended balances, 1912.

STATEMENT C.—*Continued.*

NAMES OF ACCOUNTS.	Appropriations.	Face of Ledger.		Receipts from Collector of Taxes.	Receipts from Other Sources.
		Dr.	Cr.		
Baltimore City Jail.					
Salaries	$36,050 00	$36,020 80			
Expenses	27,500 00	27,500 00			
Revenue			$7,314 14		$7,314 14
	$63,550 00	$63,520 80	$7,314 14		$7,314 14
Courts.					
Court Bailiffs, Salaries	$63,300 00	$62,414 27	$150 00		$150 00
Criminal Court, Expenses	95,462 50	93,865 98			
Baltimore City Court, Expenses	13,685 11	13,686 11	1 00		1 00
Court of Common Pleas, Expenses	7,393 70	5,814 20			
Superior Court, Expenses	13,956 70	13,956 70			
Circuit Court, Expenses	3,550 00	3,514 05			
Circuit Court No. 2 Expenses	550 00	222 10			
Orphans' Court, Salaries	10,016 00	9,984 00			
Orphans' Court, Expenses	100 00	48 00			
Trust Department, Supreme Bench	200 00	46 30			
Supreme Bench, Salaries	5,500 00	5,500 00			
Supreme Bench, Expenses	1,930 00	988 47			

Juvenile Court, Salaries	11,700 00	11,691 55	....	....	....
Juvenile Court, Expenses	450 00	450 00	....	....	....
People's Court, Salaries	76,848 01	37,143 29	....	....	....
People's Court, Expenses	805 71	805 71	....	....	....
Magistrates	21,400 00	21,197 53	....	....	....
People's Court, Revenue	....	....	24,125 77	....	24,125 77
	$326,847 73	$281,328 26	$24,276 77	....	24,276 77
MUNICIPAL FACTORY SITE COMMISSION.					
Salaries	$3,280 00	$3,279 84	....	....	....
Expenses	2,720 00	2,618 71	....	....	....
Municipal Journal	5,000 00	6,065 85	....	....	....
Revenue, Municipal Journal	....	....	$1,393 75	....	$1,393 75
	$11,000 00	$11,964 40	$1,393 75	....	$1,393 75
SINKING FUNDS.					
General Sinking Fund	$60,979 15	$62,459 78	$62,459 78	$62,459 78	....
Funding 1936 Loan Sinking Fund	34,845 23	35,691 31	35,691 31	35,691 31	....
Refunding 1940 Loan Sinking Fund	69,690 46	71,382 61	71,382 61	71,382 61	....
Four Million 1945 Loan Sinking Fund	17,422 61	17,845 66	17,845 66	17,845 66	....
Water 1916 Loan Sinking Fund	69,690 46	71,382 61	71,382 61	71,382 61	....
Water 1922 Loan Sinking Fund	17,422 62	17,845 66	17,845 66	17,845 66	....
Amounts carried forward	$270,050 53	$276,607 63	$276,607 63	$276,607 63	....

STATEMENT C.—*Continued.*

NAMES OF ACCOUNTS.	Appropriations.	Face of Ledger.		Receipts from Collector of Taxes.	Receipts from Other Sources.
		Dr.	Cr.		
Amounts brought forward......	$270,050 53	$276,607 63	$276,607 63	$276,607 63	....
Sinking Funds—*Continued.*					
Water 1926 Loan Sinking Fund....	34,845 23	35,691 31	35,691 31	35,691 31	....
Conduit 1922 Loan Sinking Fund..	34,845 23	35,691 31	35,691 31	35,691 31	....
Conduit 1928 Loan Sinking Fund..	34,845 23	35,691 31	35,691 31	35,691 31	....
Public Improvement 1940 Loan Sinking Fund	69,690 46	71,382 60	71,382 60	71,382 60	....
Internal Improvement 1928 Loan Sinking Fund	104,535 69	107,073 91	107,073 91	107,073 91	....
Burnt District 1954 Loan Sinking Fund	69,690 46	71,382 61	71,382 61	71,382 61	....
Water 1958, Water 1943, Conduit 1958, Burnt District 1960, Dock Improvement 1961, Annex 1954, Annex 1951, New Sewerage 1961, New Engine House 1957, New School House 1957, School House 1961, Park Improvement 1955, Jones Falls 1961 Sinking Funds..	370,500 00	339,200 00	347 990 25	347.990 25	....
	$989,002 83	$972,720 68	$981,510 93	$981,510 93	....

MISCELLANEOUS.					
Home for Superintendent of Sydenham Hospital	$6,095 35	$4,177 03			
Improved Heating of Schools Nos. 75, 12 and 8	5,000 00	5,000 00			
Purchase of Ground, School No. 27	3,303 89				
*Lot for New Parental School	7,000 00	11,649 30			
Additional New Building, No. 64 Branch	10,000 00				
New Addition, School No. 50	5,000 00	4,392 20			
Playground and Open-air Classroom, School No. 76	7,500 00				
Additional Yard Space, School No. 106	4,000 00				
Equipment and Installation of Fire Doors and Other Improvements, Main Building, Bay View Asylum	29,000 00	12,466 30			
Cow Barn and Stables, Bay View Asylum	12,500 00	9,110 91			
Bungalow for Physicians, Tuberculosis Hospital	5,124 70	5,069 08			
Great White Way		224 61	$1,497 40		$1,497 40
Postage Stamp Account		8,789 94	8,636 63		8,636 63
Permits for Sheds		761 19	1,790 25		1,790 25
Rental of Subways			120,800 46		120,800 46
Rentals from City Property		211 82	13,833 84		13,833 84
Rentals from Public Wharves and Docks		200 00	128,006 18		128,006 18
Amounts carried forward	$94,523 94	$52,052 38	$274,564 76		$274,564 76

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*Paid out of unexpended balances, 1912.

STATEMENT C.—*Continued.*

NAMES OF ACCOUNTS.	Appropriations.	FACE OF LEDGER.		Receipts from Collector of Taxes.	Receipts from Other Sources.
		DR.	CR.		
Amounts brought forward	$94,523 94	$52,052 38	$274,564 76		$274,564 76
MISCELLANEOUS—*Continued.*					
Inspectors of Weights and Measures			101 25		101 25
Infectious Disease Hospital			2,042 36		2,042 36
Conscience Fund			161 50		161 50
State Police			1,168,890 51	$1,168,890 51	
Public Schools			1,467,805 31	1,467,805 31	
Courts			276,607 74	276,607 74	
City Poor			646,904 94	646,904 94	
General			811,977 30	811,977 30	
Interest on Stock Debt			1,820.256 96	1,820.256 96	
Arrearages			1,056,966 78	1,056,966 78	
Tax on Securities			552,533 35	552,533 35	
Tax on Suburban Property			224,652 36	224,652 36	
Tax on Rural Property			182,331 56	182,331 56	
Tax on Savings Bank Deposits			173,186 46	173,186 46	
Interest on Taxes			88,253 83	88,253 83	
Penalties			53,849 71	53,849 71	
Special Paving Tax			62,317 76	62,317 76	

Sewer Connections			14,695 32	14,695 32	
Tax on Annex Property			27 60	27 60	
Removed Cases		1,159 35	653 60		653 60
Sales of City Property			1,600 30		1,600 30
Motor Vehicles			28,986 05		28,986 05
*New Buildings, Bay View Asylum		57,805 76			
*New Improvements		90 00			
Lot, School No. 27		11,489 47			
Unclaimed Damages for Opening Streets		1 00	80 60		80 60
*Mural Decorations, Court House		496 50			
Public Athletic League	3,000 00	3,000 00			
West Park Recreation Center	1,000 00	1,000 00			
Municipal Games, Patterson Park	500 00	499 14			
Maryland Workshop for the Blind	5,000 00	5,000 00			
Memorial to Ferdinand C. Latrobe	5,000 00				
Board of Public Improvements	600 00	501 20			
Interest on Funded Debt, Water Board			415,000 00		415,000 00
Turnpike Dividends			116 27		116 27
Interest on Funded Debt, Park Board			83,000 00		83,000 00
Interest on Funded Debt, Commissioners of Finance			148,365 00		148,365 00
Telephone Conduits			41,301 27		41,301 27
Temporary Loan			500,000 00		500,000 00
	$109,623 94	$143,094 80	$10,097,230 45	$8,601,257 49	$1.495,972 96

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*Paid out of unexpended balances, 1912.

STATEMENT C.—*Continued.*

NAMES OF ACCOUNTS.	Appropriations.	FACE OF LEDGER.		Receipts from Collector of Taxes.	Receipts from Other Sources.
		Dr.	Cr.		
REFORMATORIES.					
Maryland School for Boys, Maintenance	$7,800 00	$7,800 00	....	....	....
Manual Training, Maryland School for Boys	6,500 00	6,500 00	....	....	....
Repairs and Improvements, Maryland School for Boys	5,000 00	5,000 00	....	....	....
Maintenance, St. Mary's Industrial School	46,000 00	46,000 00	....	....	....
Maintenance, Industrial Home for Colored Girls	6,000 00	6,000 00	....	....	....
New Improvements, Industrial Home for Colored Girls	1,500 00	1,500 00	....	....	....
Maintenance, House of Good Shepherd	6,320 00	5,810 53	....	....	....
Maintenance, House of Good Shepherd for Colored Girls	6,080 00	5,724 46	....	....	....
Maintenance, Maryland Industrial School for Girls	7,200 00	3,971 74	....	....	....
Repairs to Buildings, Maryland Industrial School for Girls	2,000 00	1,973 38	....	....	....

Maintenance, House of Reformation for Colored Boys	27,520 00	26,177 81			
Maintenance, National Junior Republic	3,600 00	1,534 66			
Maintenance, Universal Progressive School for Orphan and Destitute Colored Children	1,200 00				
Maintenance, Exeter Street Rescue Home for Women	1,080 00	1,080 00			
Maintenance, Florence Crittenton Mission	1,080 00	1,080 00			
Maintenance, The Boys' Home	1,560 00	1,560 00			
Maryland Institute	12,000 00	12,000 00			
Children's Playground Association	14,000 00	14,000 00			
Veteran Volunteer Firemen's Association	1,000 00	1,000 00			
Library Company of Baltimore Bar	2,500 00	2,500 00			
	$159,940 00	$151,212 58			
CONDUIT 1962 LOAN.					
General Account			$337,023 50		$337,023 50
Salaries, Construction	$17,200 00	$16,060 49			
Expenses, Construction	500,000 00	503,477 34	14,589 20		14,589 20
	$517,200 00	$519,537 83	$351,612 70		$351,612 70

STATEMENT C.—*Continued.*

NAMES OF ACCOUNTS.	Appropriations.	Face of Ledger.		Receipts from Collector of Taxes.	Receipts from Other Sources.
		Dr.	Cr.		
DOCK IMPROVEMENT 1961 LOAN.					
Public Wharves and Docks, Salaries.	$19,068 00	$18,267 34	....	....	....
*Commercial and Recreation Pier...	150,000 00	256,067 48	$11,462 19	....	$11,462 19
*Property, Pier South Side Harbor...	....	127,722 23	3,588 86	....	3,588 86
General Account	....	8 75	152,679 00	....	152,679 00
	$169,068 00	$402,065 80	$167,730 05	....	$167,730 05
BURNT DISTRICT 1960 LOAN.					
*Widening Pratt Street............	....	$19,763 75	....	....	....
	....	$19,763 75	....	....	....
WATER 1958 LOAN.					
General Account	....	$18 00	$1,347,286 25	....	$1,347,286 25
Salaries, Gunpowder Supply Division	$75,860 00	48,918 45	32 50	....	32 50
Salaries, Filtration Division........	37,900 00	21,145 16	....	....	....
Expense, Extension of Water System	2,497,000 00	817,309 84	2,683 88	....	2,683 88
*New Pumps and Boiler, Mt. Royal Pumping Station	....	81,547 21	....	....	....
	$2,610,760 00	$968,938 66	$1,350,002 63	....	$1,350,002 63

PAVING 1951 LOAN.

Salaries, Administration	$11,180 00	$11,068 54			
Salaries, Construction	52,600 00	51,915 47			
Testing Materials	10,000 00	9,970 54			
Expenses, Paving Commission	1,900 00	831 76			
*Improved Paving	924,320 00	1,453,867 48	$43,270 48		$43,270 48
General Account		61 50	915,950 66		915,950 66
	$1,000,000 00	$1,527,715 29	$959,221 14		$959,221 14

GENERAL FUND BONDS.

General Account			$300,000 00		$300,000 00
			$300,000 00		$300,000 00

SEWERAGE 1961 LOAN.

Salaries, Administration	$27,780 00	$27,773 19			
Salaries, Construction	273,640 00	239,812 31	$75 00		$75 00
Salaries, Pumping Station	17,500 00	16,643 51			
Salaries, Disposal Plant	23,876 00	22,014 02			
Salaries, General City Cement Laboratory	7,400 00	6,042 86			
Salaries, Repairing and Cleaning Sewers	18,000 00	12,035 15			
Expenses, Pumping Station	11,500 00	10,625 00			
Amounts carried forward	$379,696 00	$334,946 04	$75 00		$75 00

*Paid out of unexpended balances, 1912.

STATEMENT C.—*Continued.*

NAMES OF ACCOUNTS.	Appropriations.	FACE OF LEDGER.		Receipts from Collector of Taxes.	Receipts from Other Sources.
		DR.	CR.		
Amounts brought forward	$379,696 00	$334,946 04	$75 00		$75 00
SEWERAGE 1961 LOAN—*Continued.*					
Expenses, Disposal Plant	6,000 00	5,993 16			
Expenses, General City Cement Laboratory	500 00	705 46	1,534 07		1,534 07
Expenses, Repairing and Cleaning Sewers	2,000 00	259 34			
Special Expenses	35,731 00	35,641 23	325 47		325 47
*Construction Expenses	2,600,000 00	3,712,891 50	27,312 56		27,312 56
General Account		6 50	3,670,533 00		3,670,533 00
	$3,023,927 00	$4,090,443 23	$3,699,780 10		$3,697,780 10
ANNEX IMPROVEMENT 1951 LOAN.					
Annex Improvement, Salaries	$19,820 00	$19,823 58	$3 58		$3 58
Acquiring Streets, Alleys, etc., Expenses Generally	420,516 71	362,416 85	10,500 35	$10,500 35	
General Account		228 75	292,078 75		292,078 75
	$440,336 71	$382,469 18	$302,582 68	$10,500 35	$292,082 33

JONES FALLS 1961 LOAN.

Opening and Constructing Public Highway	$500,000 00	$164,331 08	$2,203 64		$2,203 64
General Account			359,678 25		359,678 25
	$500,000 00	$164,331 08	$361,881 89		$361,881 89

SCHOOL HOUSE 1961 LOAN.

General Account			$71,968 75		$71,968 75
*Lot and Building, School No. 51		$4,058 00			
*Lot and Building, Polytechnic Institute	$64,000 00	90,512 48			
*Building, School No. 59		2,479 61			
*Lot and Building, School No. 6		79,729 86			
*Lot and Building, School No. 22	15,000 00	152,596 60			
*Lot and Building, School No. 27		101,544 75			
*Addition, School No. 83		39,233 61			
*Addition, School No. 99		56,344 48			
*Lot and Building, School No. 111		4,186 37			
*Purchase of Lot and Erection of Building in Vicinity of Belvieu Avenue		12 50			
	$79,000 00	$530,698 26	$71,968 75		$71,968 75

*Paid out of unexpended balances, 1912.

STATEMENT C.—*Continued.*

NAMES OF ACCOUNTS.	Appropriations.	FACE OF LEDGER.		Receipts from Collector of Taxes.	Receipts from Other Sources.
		DR.	CR.		
NEW SCHOOL HOUSE 1957 LOAN.					
*Building, School No. 59		$1,016 29			
*Lot and Building, School No. 6		17,829 83			
		$18,846 12			
OPENING AND CLOSING STREETS.					
*Opening Luzerne Avenue, Ord. 198, 1912		$216 64			
*Opening Rose Street, Ord. 194, 1912		164 72			
*Opening Ashland Avenue, Ord. 197, 1912		171 56			
*Opening Belnord Avenue, Ord. 196, 1912		224 23			
*Opening Lakewood Avenue, Ord. 195, 1912		167 64			
*Opening Kenwood Avenue, Ord. 199, 1912		242 13			
*Opening Jefferson Street, Ord. 193, 1912		177 79			
*Closing Howard Street, Ord. 387, 1909		67 84			

*Opening Liberty Heights Avenue, Ord. 179, 1912	....	1,375 87	....	....	....
*Opening Key Highway, Ord. 682, 1911	....	406 64	....	....	....
*Opening Warwick Avenue, Ord. 187, 1912	....	527 03	....	....	....
*Opening Woodberry Avenue, Ord. 186, 1912	....	448 76	$344 25	$344 25	....
*Opening Centre and Front Streets, Ord. 270, 1912	....	126 83	....	....	....
*Opening Green Spring Parkway, Ord. 181, 1912	....	1,594 65	....	....	....
*Opening Riverside Avenue, Ord. 159, 1912	$23,818 43	25,820 94	1,716 75	1,716 75	....
*Opening Homestead Street, Ord. 335, 1909	....	258 23	474 00	100 00	$374 00
*Opening Curley Street, Ord. 137, 1912	....	97 61	294 00	294 00	....
*Opening Spring Garden Avenue, Ord. 387, 1909	....	32 90	....	....	....
*Widening Little Greene Street, Ord. 27, 1911	31,825 59	33,875 90	2,871 50	1 881 50	990 00
Widening Frederick Road, Ord. 33, 1911	....	....	2 00	2 00	....
*Opening Glover Street, Ord. 16, 1911	2,262 26	4,188 78	1,999 88	1,999 88	....
*Opening Creamer Alley, Ord. 26, 1911	18 571 20	17,961 30	417 50	....	417 50
*Opening Fortieth Street, Ord. 180, 1908	....	4,094 46	2,075 33	2,075 33	....
Amounts carried forward	$76,477 48	$93,142 45	$10,195 21	$8,413 71	$1,781 50

*Paid out of unexpended balances, 1912.

STATEMENT C.—*Continued.*

NAMES OF ACCOUNTS.	Appropriations.	FACE OF LEDGER.		Receipts from Collector of Taxes.	Receipts from Other Sources.
		DR.	CR.		
Amounts brought forward	$76,477 48	$93,142 45	$10,195 21	$8,413 71	$1,781 50
OPENING AND CLOSING STREETS—*Continued.*					
*Widening Belair Road, Ord. 679, 1911		3,084 11			
*Opening Taylor Street, Ord. 698, 1911		140 73			
*Opening Park Hill Avenue, Ord. 704, 1911		96 07			
*Opening Wyman Avenue, Ord. 695, 1911		9 00			
*Opening Thirty-third Street, Ord. 251, 1907		133,477 70	54,755 80	54,070 80	685 00
*Opening Eleventh Street, Ord. 261, 1907		31,243 97	5,215 35	4,979 35	236 00
*Opening Montebello Avenue, Ord. 289, 1907	22,059 08	22,839 25	2,330 50	2,325 50	5 00
*Opening Thirtieth Street, Ord. 117, 1908	17,818 99	24,495 54	6,051 57	6,016 57	35 00
*Opening Oak Street, Ord. 386, 1909	3,811 41	6,006 16	2,931 60	2,931 60	
*Opening Saratoga Street, Ord. 397, 1909	752 86	5,486 00			

*Opening Slingluff Avenue, Ord. 357, 1909		12 00			
*Opening Dukeland Street, Ord. 286, 1909		14 00			
*Opening Homestead Street, Ord. 336, 1909		12 10			
*Opening Twenty-fifth Street, Ord. 416, 1909		299 00			
*Opening Twenty-sixth Street, Ord. 417, 1909		13 20			
*Opening Windsor Mill Road, Ord. 534, 1910		88 04			
*Opening Pratt Street, Ord. 572, 1910		12 60			
*Opening Baker Street, Ord. 535, 1910	7,864 60	22,773 74	19,502 25	19,502 25	
*Opening Remington Avenue, Ord. 605, 1910		250 00			
*Opening Dukeland Street, Ord. 624, 1911		381 66	61 00	61 00	
*Opening Ashburton Street, Ord. 681, 1911		134 97			
Widening Thames Street, Ord. 689, 1911			269 33	269 33	
*Opening Longwood Street, Ord. 64, 1912		570 09			
Opening Belle Avenue (formerly Palatka Avenue), Ord. 60, 1911			496 17	496 17	
*Opening McPhail Street, Ord. 65, 1912		71 45	1,585 00	1,585 00	
*Opening Fallsway, Ord. 70, 1912		40 73			
Amounts carried forward	$128,784 51	$344,694 56	$103,393 78	$100,651 28	$2,742 50

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*Paid out of unexpended balances, 1912.

STATEMENT C.—*Continued.*

NAMES OF ACCOUNTS.	Appropriations.	Face of Ledger.		Receipts from Collector of Taxes.	Receipts from Other Sources.
		Dr.	Cr.		
Amounts brought forward	$128,784 51	$344,094 56	$103,393 78	$100,651 28	$2,742 50
Opening and Closing Streets—*Continued.*					
*Opening Barre Street, Ord. 387, 1909		30 79			
*Opening Welcome Alley, Ord. 387, 1909		30 79			
*Closing Conway Street, Ord. 387, 1909		32 90			
*Closing Perry Street, Ord. 387, 1909		32 69			
*Closing Wayne Street, Ord. 387, 1909		33 29			
*Closing Hood Street, Ord. 95, 1912		10 00	398 00	398 00	
*Opening Adams Street, Ord. 109, 1912		425 09			
*Opening Bartlett Avenue, Ord. 119, 1912	7,808 79	13,484 80	4,483 00	4,483 00	
*Opening Twenty-eighth Street, Ord. 120, 1912		379 98			
*Opening Hilton Street, Ord. 126, 1912		139 15			
*Closing Hilton Street, Ord. 116, 1912		40 00			

*Closing Patapsco Street, Ord. 387, 1909		32 30			
*Closing York Street, Ord. 387, 1909		32 30			
*Closing Front, Constitution and Centre Streets, Ord. 143, 1912		126 00			
*Opening Thirty-seventh Street, Ord. 145, 1912		1,130 00			
*Widening Harford Road		4,312 42	20,121 81		20,121 81
*Closing Montgomery Street, Ord. 216, 1912		50 79			
*Widening Hillen Street, Ord. 219, 1912	25,000 00	373 86			
*Widening Pennsylvania Avenue and Reisterstown Road, Ord. 223, 1913		1,487 90			
*Widening Ostend Street, Ord. 266, 1913		277 37	1,250 00		1,250 00
*Twenty-fourth Street, Ord. 216, 1912		211 95			
*Opening Spring Garden Avenue, Ord. 295, 1913		221 50			
*Opening Wyanoke Avenue, Ord. 310, 1913		390 30			
*Opening Linwood Avenue, Ord. 284, 1913		237 94			
*The Alameda		462 78			
*Nursery Alley		185 40	1 00	1 00	
*Widening Brunswick Street, Ord. 342, 1913		140 23			
*Opening Curley Street, Ord. 256, 1913		156 15			
Amounts carried forward	$161,593 30	$369,163 23	$129,647 59	$105,533 28	$24,114 31

*Paid out of unexpended balances, 1912.

STATEMENT C.—*Continued.*

NAMES OF ACCOUNTS.	Appropriations.	Face of Ledger.		Receipts from Collector of Taxes.	Receipts from Other Sources.
		Dr.	Cr.		
Amounts brought forward	$161,593 30	$369,163 23	$129,647 50	$105,533 28	$24,114 31
Opening and Closing Streets *Continued.*					
*Widening Courtland Street, Ord. 330		1,000 94			
*Opening Glover Street, Ord 262, 1913		75 89			
*Closing Church Street, Ord. 282, 1913		158 25			
*Opening Eager Place, Ord. 263, 1913		431 58	130 00		130 00
*Opening Aisquith Street, Ord. 331, 1913		843 13	175 00		175 00
*Opening Monastery Lane		171 82			
*Opening Highway from Chestnut Avenue to Thirty-third Street, Ord. 365		155 37			
*Opening Key Highway, Ord. 261, 1913		1,840 07			
*Widening Hillen and Stockholm Streets		8,550 80			
*Opening Wolfe Street, Ord. 337, 1913		352 66			

*Opening Covington Street, Ord. 373		222 10			
*Closing Harford Road		72 68			
*Opening Luzerne Street, Ord. 301, 1913		317 45			
*Opening Broadway		28 58			
*Opening Hamburg Street		28 24			
*Opening Wicomico Street		27 79			
*Opening Gwynn's Falls Parkway, Ord. 678, 1911		110 59			
*Opening Bonner Road		352 00			
Opening Thirty-first Street, Ord. 256, 1911	300 33				
	$161,893 63	$383,903 17	$129 952 59	$105 533 28	$24,419 31

SUMMARY.

Board of Park Commissioners	$756,411 27	$639,193 80	$593,662 48		$593,662 48
Collector of Water Rents and Licenses	469,775 00	480,816 07	1,493 003 08		1,493,003 08
Water Engineer's Department	798,890 00	796,098 87	2 431 90		2,431 90
General Licenses, Markets, Fines, Interest on Deposits, Wharfage, Dog Licenses and Fines	2,100 00	34,569 22	346,344 33		346,344 33
Inspector of Buildings	460,023 39	474,965 26	20 14		20 14
Commissioner of Street Cleaning	822,658 22	757,154 64	6,398 97		6,398 97
Supt. of Lamps and Lighting	463,978 01	462,470 21	426 92		426 92
Amounts carried forward	$3,773,835 89	$3,645,268 07	$2,442,287 82		$2,442,287 82

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*Paid out of unexpended balances, 1912.

STATEMENT C.—*Continued.*

NAMES OF ACCOUNTS.	Appropriations.	FACE OF LEDGER.		Receipts from Collector of Taxes.	Receipts from Other Sources.
		Dr.	Cr.		
Amounts brought forward	$3,773,835 89	$3,645,268 07	$2,442,287 82	....	$2,442,287 82
SUMMARY—*Continued.*					
Harbor Board	112,291 00	114,530 51	7,956 02	....	7,956 02
Commissioner of Health	232,424 65	230,581 88	24,904 53	....	24,904 53
Board of Fire Commissioners	1,128,569 32	1,092,399 01	6,683 40	....	6,683 40
City Collector	151,735 00	152,179 97	1,526 20	....	1,526 20
City Engineer	539,813 97	1,051,013 49	272,214 90	$6,549 72	265,665 18
Commissioners for Opening Streets	10,400 00	10,347 44	....	....	....
Liquor License Commissioners	16,925 41	16,948 41	996,541 31	....	996,541 31
Supervisors of Elections	135,971 00	135,940 58	3,840 00	....	3,840 00
City Librarian	30,822 00	29,521 44	94 00	....	94 00
Superintendent of Public Buildings	81,775 00	82,066 91	473 97	....	473 97
Diary City Council	59,811 58	59,557 77	....	....	....
Mayoralty	19,927 17	19,957 73	41 67	....	41 67
City Register	2,869,116 75	2,981,157 72	163,938 50	....	163,938 50
City Comptroller	54,525 97	50,856 71	44 70	....	44 70
Law Department	47,800 00	38,718 72	311 80	....	311 80
Department of Legislative Reference	3,690 00	3,629 25	....	....	....
Topographical Survey	15,925 00	15,829 42	4,147 52	....	4,147 52
Free Bath Commission	79,453 00	80,151 06	22,629 84	....	22,629 84
Miscellaneous Accounts	189,176 36	189,362 50	4,940 09	....	4,940 09

Board of School Commissioners	1,857,644 00	1,946,792 10	599,999 87		599,999 87
Board of Police Commissioners	1,320,280 50	1,311,839 18			
Supervisors of City Charities	518,806 00	489,991 89	19,081 99		19,081 99
Baltimore City Jail	63,550 00	63,520 80	7,314 14		7,314 14
Courts, Bailiffs, etc.	326,847 73	281,328 26	24,276 77		24,276 77
Municipal Factory Site Commission and Municipal Journal	11,000 00	11,964 40	1,393 75		1,393 75
Sinking Funds	989,002 83	972,720 68	981,510 93	981,510 93	
Miscellaneous Accounts	109,623 94	143,094 80	10,097,230 45	8,601,257 49	1,495,972 96
Reformatories	159,940 00	151,212 58			
Conduit 1962 Loan	517,200 00	519,537 83	351,612 70		351,612 70
Dock Improvement 1961 Loan	169,068 00	402,065 80	167,730 05		167,730 05
Burnt District 1960 Loan		19,763 75			
Water 1958 Loan	2,610,760 00	968,938 66	1,350,002 63		1,350,002 63
Paving 1951 Loan	1,000,000 00	1,527,715 29	959,221 14		959,221 14
General Fund Bonds			300,000 00		300,000 00
Jones Falls 1961 Loan	500,000 00	164,331 08	361,881 89		361,881 89
Sewerage 1961 Loan	3,023,927 00	4,090,443 23	3,699,780 10		3,699,780 10
Annex Improvement 1951 Loan	440,336 71	382,469 18	302,582 68	10,500 35	292,082 33
School House 1961 Loan	79,000 00	530,698 26	71,968 75		71,968 75
School House 1957 Loan		18,846 12			
Opening and Closing Streets	161,893 63	383,903 17	129,952 59	105,533 28	24,419 31
Cash Balance, January 1, 1913			2,641,771 52		
Cash Balance, December 31, 1913		1,638,692 57			
	$23,412,869 41	$26,019,888 22	$26,019,888 22	$9,705,351 77	$13,672,764 93

STATEMENT D.

Fund Held in Trust by the City Register for Property Sold for Taxes, December 31, 1913.

Water 5% 1916 Loan		$1,500 00
Consolidated 3½% 1930 Loan	$10,200 00	
Refunding 3½% 1940 Loan	6,600 00	
Public Improvement 3½% 1940 Loan	5,300 00	
New Sewerage Improvement 3½% 1980 Loan	7,600 00	
Burnt District Improvement 3½% 1954 Loan	1,500 00	
W. M. R. R. 3¼% 1927 Loan	500 00	
Four Million 3½% 1945 Loan	100 00	
		31,800 00
		$33,300 00
Cash		1,398 11
		$34,698 11

STATEMENT E.

Fund Held in Trust by the City Register for Unclaimed Damages for Opening Streets, December 31, 1913.

Funding 5% 1916 Loan (Account Preston Street)	$600 00

REPORT OF THE

COMMISSIONERS OF FINANCE

OF BALTIMORE CITY

FOR THE YEAR 1913

BOARD OF COMMISSIONERS OF FINANCE

PRESIDENT

John M. Littig.

James H. Preston, *Mayor.*
Richard Gwinn, *City Register.*
James F. Thrift, *Comptroller.*
Harry Fahnestock.

CLERK

Isaac L. Newman, *Deputy City Register*

REPORT

Department of Finance,
Sub-Department, Commissioners of Finance,
City Hall,
Baltimore, December 31, 1913.

To the Honorable the Members of the First and
Second Branches of the City Council of Baltimore.

Gentlemen—In compliance with Section 16, Article 47, of the Baltimore City Code of 1893, the Commissioners of Finance have the honor to submit herewith their report showing in detail their transactions during the current year, by the following statements:

1. Receipts and payments on account of the various sinking funds (page 78).
2. The purchases of stock for the sinking funds (page 95).
3. The condition of the various sinking funds (page 108).
4. The condition of the Enoch Pratt Free Library Fund (page 126).
5. The condition of the Horwitz Benevolent Fund (page 127).
6. The condition of the Frederick Raine Fund (page 128).
7. A schedule of real estate from which ground rents are derived (page 128).
8. Cash balances of sinking funds (page 131).
9. A statement of the funded debt (page 132).
10. A statement of the issues of Baltimore City Stock held by the Commissioners of Finance in the sinking and special funds (facing page 134).

The matters embraced in the foregoing are exhibited under their respective heads in detailed form in the appendix to this report.

1.—Receipts and Payments

The receipts were as follows:

Cash to credit of Sinking and Special Funds, December 31, 1912		$16,231 57
Interest on stock and investments		907,512 92
Interest on deposits (daily bank balances)		4,375 52
Ground rents and rentals from real estate:		
Water Board	$306 00	
Park Board	6,782 62	
Mayor and City Council	19,865 59	
Individuals, corporations and firms	5,073 15	
		32,027 36
Water Board, 1½% of gross receipts for 1912, annual contribution to Water 1943 Loan Sinking Fund		21,614 43
Park Board, 5% of gross receipts park tax, annual contribution to Public Park Sinking Fund No. 2		29,042 29
Park Board, annual contribution to Public Park Improvement 1955 Loan Sinking Fund		8,800 00
Forfeit of deposit with bid for purchase of city stock		40 00
Mayor and City Council, to supply the annual deficiency in income of Enoch Pratt Free Library Fund		4,258 00
Mayor and City Council, by tax levy for the various sinking funds:		
Through City Collector	$633,520 68	
Through City Comptroller	89,200 00	
		722,720 68
Commissioners of Finance, from sale of content of Water 1922 Loan Sinking Fund in the redemption of Water 4% 1922 Stock, prior to its maturity		500,000 00
Amount carried forward		$2,246,622 77

Amount brought forward	$2,246,622 77	
Commissioners of Finance, cash portion of Water 1922 Loan Sinking Fund, transferred to Enoch Pratt Free Library Fund, under resolution of Commissioners of Finance, December 4, 1913	1,284 85	
		$2,247,907 62

The payments were as follows:

Baltimore City stock purchased for the various sinking funds	$1,508,555 78	
One year's interest on W. M. R. R. 3¼% 1927 Loan	55,380 00	
One year's interest on W. M. R. R. 3½% 1950 Loan	30,625 00	
One year's interest on W. M. R. R. 3½% 1952 Loan	35,000 00	
One year's interest on W. M. R. R. 4% 1925 Loan	27,360 00	
Enoch Pratt Free Library, annuity	50,000 00	
Maryland Institute, for medal, account Frederick Raine Fund	7 00	
Board of School Commissioners, for medal, account Frederick Raine Fund	7 00	
James H. Preston, Mayor, account of third distribution of income from Horwitz Benevolent Fund	742 80	
Thomas Hughes, trustee, redemption of Five Million 6% 1890 Loan, in part	1,703 45	
Commissioners of Finance, redemption of entire issue of Water 4% 1922 Loan, held in Enoch Pratt Free Library Fund, in conformity to the resolution of the Commissioners of Finance, December 4, 1913	500,000 00	
Commissioners of Finance, for account Enoch Pratt Free Library Fund, cash portion of Water 1922 Loan Sinking Fund remaining after the redemption of Water 4% 1922 stock, as authorized by resolution of the Commissioners of Finance, December 4, 1913	1,284 85	
		2,210,665 88
Balance to credit of Sinking and Special Funds, December 31, 1913		$37,241 74

2.—Purchases of Stock.

This statement is submitted in obedience to Section 13, Article 47, Baltimore City Code (1893), and exhibits in detail the purchases of stock during the current year amounting to $1,575,100, at a cost of $1,508,555.78.

3.—The Sinking Funds.

This statement shows the condition of the various sinking funds, at their face value, set apart for the redemption of the public debt. They are held in trust by the Commissioners of Finance, and amount to $26,036,750.17.

4.—Enoch Pratt Free Library Fund.

This statement shows the condition of the Enoch Pratt Free Library Fund, under the control of the Commissioners of Finance, who were required "to invest the interest upon the investments in the sinking fund, and the interest upon the interest, as the same shall be received, in the public debt of the City of Baltimore, until the annual income from said investment shall reach the sum of fifty thousand dollars." In the meantime the Mayor and City Council were required to pay the annuity by tax levy. In 1892 the taxation for this purpose ceased, for the reason that the income from investments contained in the fund yielded $50,341.

By the redemption of the 5 and 6 per cent. loans in the fund, from 1893 to the year 1902, and the reinvestment in stock bearing 3½ per cent. interest on the amounts received therefrom, the income has been reduced to $45,742; consequently, it is necessary for the Mayor and City Council to supply, by taxation, the annual deficiency of $4,258.

5.—The Horwitz Benevolent Fund.

This statement shows the condition of the Horwitz Benevolent Fund, under the management of the Commissioners of Finance, who, on December 28, 1888, under authority of Resolution No. 7, of 1888, accepted from the executors of Orville Horwitz, deceased, the sum of ten thousand ($10,000) dollars which is held in trust as directed under the following provision of the last will and testament of the said deceased:

"Article 7. I give and bequeath unto the Mayor and City Council of Baltimore the sum of ten thousand dollars to be invested in permanent securities in the City of Baltimore, and as soon as the said sum by investments and re-investments of the rents, issues and profits thereof, shall have been increased to the sum of twenty thousand dollars, then I will and desire that the said rents, issues and profits shall be annually distributed under the direction of the Mayor of said corporation, in aid of the support of twelve poor families of said City of Baltimore, to be selected by said Mayor without distinction of race, color, religion or politics in such proportions and sums as to the said Mayor may seem just; the said Mayor to report annually in his message to the City Council of said city the mode in which the said annual income has been distributed and the amounts in which and persons to whom the same has been paid and the reasons which have induced him to make such distribution. It is hoped that this bequest will be faithfully administered, and the money will not be wasted amongst political idlers or bummers, as they are called, but will be so applied as to relieve the actual distress of worthy persons, and induce others to follow my example. The fund shall be known as the Horwitz Benevolent Fund."

This fund now contains $20,000 of various issues of Baltimore City stock, the result of investing the annual income from the original investment of $10,000 in city stock in 1888 under the provisions of the testator's will. The annual income of this fund is distributed by the Mayor, according to the terms and conditions of said will.

6.—The Frederick Raine Fund.

This statement shows the condition of the Frederick Raine Fund, under the control of the Commissioners of Finance, who, on November 6, 1897, under authority of Resolution No. 51, of 1897, accepted from the executors of the estate of Frederick Raine, deceased, four hundred dollars (and accrued interest amounting to eighteen dollars and seventy cents), which amount has been invested in city stock; "the interest on two hundred dollars thereof to be annually expended for a medal, to be known as the 'Frederick Raine Medal,' and to be presented to the student in Baltimore City College who shall be adjudged, by the methods of determining merit practiced in said college, to be most proficient in the study of the German language and German literature," and "the interest on two hundred dollars thereof to be annually expended for a medal, known as the 'Frederick Raine Medal,' and to be presented to the student in the Maryland Institute for the promotion of the Mechanics Arts who shall be adjudged, by the methods of determining merit practiced in said institute, to be most proficient in mechanical drawing," according to the terms of the last will and testament of said Frederick Raine, deceased.

7.—Western Maryland Railroad Company.

A sale of the city's interest in the Western Maryland Railroad Company was made on June 27, 1902, to the Fuller Syndicate, for the sum of $8,751,370.45 *cash*, and the securities and cash contained in the following sinking funds, belonging to the Western Maryland Railroad

Company and held in trust by the Commissioners of Finance for the said Western Maryland Railroad Company, viz.: The Hillen Station Sinking Fund, amounting to $87,959.57, which was set apart for the redemption of the ground rent on Hillen Station property; The Western Maryland Railroad Terminal Company Sinking Fund, amounting to $35,187.85, which was set apart for the redemption of the ground rent on the Western Maryland Railroad Terminal Company depot property; also the Western Maryland Railroad 1927 Loan Sinking Fund, amounting to $162,662.29, which was set apart for the redemption of the Western Maryland Railroad 3¼ per cent. 1927 Loan. This last-named amount of $162,662.29, with the addition of $4,263,000, plus $65,909.71, making a total of $4,328,909.71, was placed in a sinking fund, to be called the "Western Maryland Railroad Sinking Fund," for the redemption at maturity of the Western Maryland Railroad 4 per cent. 1925 Loan, amounting to $684,000; the Western Maryland Railroad 3¼ per cent. 1927 Loan, amounting to $1,704,000; the Western Maryland Railroad 3½ per cent. 1950 Loan, amounting to $875,000, and the Western Maryland Railroad 3½ per cent. 1952 Loan, amounting to $1,000,000. Total, $4,263,000.

The investment of $4,263,000 of above amount of $4,328,909.71 is secured by certificates of deposit, with a like amount of city stock as collateral. The balance has been paid and invested in city stock.

The interest on the investment of said fund is to be applied to the payment of the annual interest on the outstanding loans mentioned. The addition to the special fund of $4,263,000 of the amount contained in the Western Maryland Railroad 1927 Loan Sinking Fund ($162,622.29), and $65,909.71 from proceeds of the sale was made in order to provide the annual deficiency between the fixed interest charge of $148,365 per annum on above outstanding loans and the interest to be derived from the investment of $4,263,000 in said sinking fund at 3¼ per cent., amounting to $138,547.50 annually.

8.—REAL ESTATE AND GROUND RENTS.

The schedule of real estate and ground rents, presented in this form for convenience of reference, embraces only so much of the city property as is in control and shown upon the books of the Commissioners of Finance, and from which income is derived from rentals.

The income derived from public wharves, turnpike stock and market houses being applied to current expenses of the Mayor and City Council, does not appear in these statements. (Section 15, Article 47, City Code, 1893.)

9.—CASH BALANCES OF SINKING AND SPECIAL FUNDS.

This statement shows the cash balances of the Sinking and Special Funds, which aggregated on December 31, 1913, $37,241.74.

The foregoing statement does not embrace any items connected with the current receipts and expenditures, but refers only to the stock obligations of the corporation and to investments specially set apart for the redemption of the same.

The accounts now submitted for your consideration exhibit in detail all the transactions of the Commissioners of Finance for the current fiscal year.

They show the receipts, including a cash balance at the beginning of the year, to have been	$2,747,907 62
And the payments to have been	2,710,665 88
Leaving a balance to the credit of the Sinking and Special Funds, on December 31, 1913, of	$37,241 74

FUNDED DEBT.

The funded debt, December 31, 1913, is	$78,917,679 50	
The funded debt, December 31, 1912, was	71,294,382 95	
Showing an increase during the year of		$7,623,296 55

The following stock having been issued:

Paving 4% 1951 Loan	$1,000 000 00	
Annex Improvement 4% 1951 Loan	325,000 00	
General Fund Bonds ¼ of 1% 1955 Loan	300,000 00	
Water 4% 1958 Loan	1,500,000 00	
Dock Improvement 4% 1961 Loan	170,000 00	
Jones Falls Improvement 4% 1961 Loan	400,000 00	
New Sewerage Improvement 4% 1961 Loan	3,975,000 00	
School House 4% 1961 Loan	80,000 00	
Conduit 4% 1962 Loan	375,000 00	
		8,125,000 00
Less $1,703.45 Five Million 6% 1890 Loan, redeemed	$1,703 45	
Less $500,000 Water 4% 1922 Loan redeemed, prior to maturity	500,000 00	
		501,703 45
		$7,623,296 55

Increment of the Sinking Funds.

The increment of the sinking funds from December 31, 1912, to December 31, 1913, amounting to........			$993,825 38
Was derived thus:			
From interest on city stock and other investments	$907,512 92		
Less portion applicable only to Enoch Pratt Free Library, Horwitz Benevolent and Frederick Raine funds.....	46,498 74		
		$861,014 18	
From rentals of real estate................		32,027 36	
From interest on bank deposits..........		4,375 52	
From Water Board, 1½% of gross receipts.		21,614 43	
From Park Board, annual contribution to Public Park Improvement 1955 Loan Sinking Fund		8,800 00	
From Park Board, 5% of "park tax"......		29,042 29	
From forfeiture of deposit with bid for stock		40 00	
From Mayor and City Council by tax levy:			
City Collector	$633,520 68		
City Comptroller	89,200 00		
		722,720 68	
From discount in the purchases of city stock for sinking funds:			
Par value of the stock.....	$1,575,100 00		
Cost	1,508,555 78		
		66,544 22	
			$1,746,178 68
From which deduct:			
One year's interest on W. M. R. R. 3¼% 1927 Loan............................		$55,380 00	
One's year's interest on W. M. R. R. 3½% 1950 Loan		30,625 00	
Amounts carried forward............		$86,005 00	$1,746,178 68

Amounts brought forward		$86,005 00	$1,746,178 68
One year's interest on W. M. R. R. 3½% 1952 Loan		35,000 00	
One year's interest on W. M. R. R. 4% 1925 Loan		27,360 00	148,365 00
Redemption of Five Million 6% 1890 Loan.		$1,703 45	$1,597,813 68
Extinguishment of Water 1922 Loan Sinking Fund in the redemption of Water 4% 1922 stock:			
Various issues of stock in fund	$601,000 00		
Cash contained in fund	1,284 85	602,284 85	603,988 30
			$993,825 38

The face value of the sinking funds December 31, 1913, is	$26,036,750 17	
The face value of the sinking funds December 31, 1912, was	25,042,924 79	
		$993,825 38

The increased value of the sinking funds is thus explained:

Increment of the sinking funds, as shown in detailed statement		$1,597,813 68
Less amount of Water 1922 Loan Sinking Fund extinguished in the redemption and cancellation of Water 4% 1922 stock, prior to its maturity	$602,284 85	
And redemption of Five Million 6% 1890 Loan, in part	1,703 45	
		603,988 30
		$993,825 38

INCREASE OF FUNDED DEBT AUTHORIZED, BUT NOT YET ISSUED.

Annex Improvement 4% 1951 Loan, Ordinance No. 662, 1911	$1,775,000 00
Conduit 4% 1962 Loan, Ordinance No. 162, 1912	1,625,000 00
Dock Improvement 4% 1961 Loan, Ordinance No. 557, 1910	1,030,000 00
General Fund Bonds, ¼ of 1% 1955 Loan, Ordinance No. 564, 1910	2,100,000 00
Jones Falls Improvement 4% 1961 Loan, Ordinance No. 555, 1910	300,000 00
New Sewerage Improvement 4% 1961 Loan, Ordinance No. 653, 1911	4,025,000 00
Paving 4% 1951 Loan, Ordinance No. 661, 1911	2,500,000 00
School House 4% 1961 Loan, Ordinance No. 556, 1910	610,000 00
Water 4% 1958 Loan, Ordinance No. 141, 1908	2,900,000 00
	$16,865,000 00

FINANCIAL CONDITION OF THE CORPORATION.

Amount of funded debt, December 31, 1913		$78,917,679 50
Temporary loans from national banks, on the several promissory notes of the Mayor and City Council, in anticipation of receipts from taxes	$500,000 00	
Accrued interest to December 31, 1913, at 4½%	250 00	
Accrued interest to December 31, 1913, at 5%	375 00	
		500,625 00
Against which the city holds the following productive assets:		$79,418,304 50
Sinking funds, face value	$26,036,750 17	
Water works, stock outstanding	11,100,000 00	
Electrical conduit system, stock outstanding	3,375,000 00	
New docks and piers, stock outstanding	6,105,000 00	
550 shares Baltimore and Reisterstown Turnpike stock, dividend paying	412 50	
		46,617,162 67
Excess of funded debt over productive assets		$32,801,141 83

UNPRODUCTIVE ASSETS.

10,000 shares Valley Railroad of Virginia stock........	....
625 shares Baltimore and York Turnpike stock..........	....
New Court House, cost............................	$2,750,000 00
City Hall, cost..................................	2,250,000 00
Market and school houses, Jail, police stations, engine houses, iceboats, Quarantine Station, parks and squares	15,000,000 00
	$20,000,000 00

BALTIMORE AUDIT COMPANY,
1027-1033 CALVERT BUILDING,

BALTIMORE, March 20, 1914.

To the Honorable Mayor and City Council of Baltimore.

GENTLEMEN—We beg to report that on the 19th instant, in the presence of the Commissioners of Finance, we examined all the certificates of city stock deposited in a vault at the Safe Deposit and Trust Company, held by the Commissioners in trust for the various sinking and special funds, as follows:

City stock on hand, January 1, 1913		$20,207,359 97
Purchase of city stock from time to time during 1913		1,575,100 00
		$21,782,459 97
Less Water 1922 Sinking Fund, sold to Enoch Pratt Free Library Sinking Fund		601,000 00
		$21,181,459 97
Certificates of deposit (city stock as collateral)		4,263,000 00
		$25,444,459 97
Enoch Pratt Free Library Fund, January 1, 1913	$1,174,100 00	
Less Water 1922 5 per cent., sold to Finance Commissioners	500,000 00	
	$674,100 00	
Plus Water 1922 5 per cent., purchased from Finance Commissioners	601,000 00	
		1,275,100 00
Horwitz Benevolent Fund		20,000 00
Frederick Raine Fund		400 00
		$26,739,959 97

We have fully verified by count the foregoing funds.

We have also, by inspection and count, verified the certificates of deposit of the various institutions secured by city stock to the amount of $4,263,000, which represents a part of the Western Maryland Sinking Fund, and have seen that the proper powers of attorney accompany each and every certificate of stock pledged.

We have also verified, by certificates of the depository banks, the cash held by the Commissioners of Finance against the various sinking and special funds, amounting to $37,241.74.

The figures given above are all in accord and agreement with the books as kept in the office of the Commissioners, the detail of which will be fully shown in our report.

We feel that the City of Baltimore is to be congratulated on the splendid condition of its finances, and the able manner in which they are handled by the Commissioners and City Register, under whose immediate supervision they come.

Respectfully submitted,

BALTIMORE AUDIT COMPANY,
CHARLES L. HEHL,
Certified Public Accountant, President.

The principal sale of city stock for financing the public work in progress, took place this year in June. The amount then sold was $5,500,000. This time was selected after mature deliberation and after consultation with leading financiers both here and in New York.

The sale was advertised and the stock offered in the usual way, by sealed proposals, but on account of extremely unfavorable market conditions, which came about more or less suddenly, the bidding was unsatisfactory as to price, and there was but one bid for the entire offering. It was then decided to offer the stock "over the counter" direct to the public at the fixed price of ninety dollars per hundred. This price was based upon the existing condition of the market, and upon the basis on which other cities had, about that time, disposed of their bonds.

The sale was at once begun and there was an eager demand for the stock on the part of the public, due in some degree to extensive advertising, but mainly on account of the attractive price at which it was offered. Similar sales have heretofore been conducted by the city, but none where the amount of stock to be sold was as large as in this instance, and none with such great success.

Owing to the unexpected activity of the departments doing public work, the city's expenditures during the year were larger than had been anticipated by the departments, and it became necessary toward the end of the year to sell some additional stock; accordingly, a public sale by sealed proposals was held on December 1, for the disposal of $1,800,000 of New Sewerage 1961 Loan. The bidding was spirited, and a number proposed to take the entire offering, which was allotted to the highest of these bids at 94.83, and which was nearly eight points higher than the bid for the entire offering in June.

At the time of the sale in June, the Commissioners purchased for the sinking funds at the selling price of ninety $275,000, consisting of $50,000 School House 1961 and $225,000 New Sewerage 1961 Loans. At the time of the December sale, but independent thereof, they purchased $350,000 of Paving 1951 Loan and $175,000 New Sewerage 1961 Loan at the same price at which the New Sewerage 1961 Loan had been allotted, namely, 94.83. These purchases, with $300,000 General Fund Bonds One-Quarter per Cent. 1955 Loan, purchased early in the year at par, made $1,100,000 purchased from the Mayor and City Council during the year for the sinking funds. In addition, there was purchased in the open market $475,100, making in all $1,575,100 purchased for the sinking funds throughout the year.

During the year the Commissioners considered jointly with the Board of Estimates the recommendations of the City Register for the cancellation of Water 1922 Loan. Among the securities in the Enoch Pratt Free Library Fund was $500,000 of the Water 1922 Loan, which amount constituted the entire issue. The sinking fund already accumulated amounted to more than the face of the loan, and it was recommended that the repayment of the loan be anticipated by the selling of its sinking fund to the Enoch Pratt Free Library Fund for $500,000 and the amount applied to the redemption of the loan. Under resolutions of the Board of Estimates and the Commissioners of Finance this was done at the close of the year, thereby eliminating this loan and saving the city the unnecessary contributions of interest and sinking fund for the ensuing nine years.

Respectfully submitted,

JOHN M. LITTIG, *President*,
JAMES H. PRESTON, *Mayor*,
JAMES F. THRIFT, *Comptroller*,
RICHARD GWINN, *City Register*,
HARRY FAHNESTOCK,
} *Board of Commissioners of Finance.*

ISAAC L. NEWMAN, *Deputy City Register*,
Clerk to Board of Commissioners of Finance.

APPENDIX

STATEMENT

Dr. THE COMMISSIONERS OF FINANCE, IN ACCOUNT WITH

Cash balance December 31, 1912			$16,231 57
GENERAL SINKING FUND.			
From interest on stock in fund		$141,055 20	
From interest on bank deposits (daily balances)		4,375 52	
From rentals of real estate and ground rents:			
Water Board	$306 00		
Park Board	6,782 62		
Mayor and City Council	19,865 59		
Individuals, corporations, firms	5,073 15		
		32,027 36	
From City Collector, by tax levy		62,459 78	
			239,917 86
PUBLIC PARK SINKING FUND NO. 2.			
From interest on stock in fund		$14,679 74	
From Park Board, 5% of gross receipts from "Park Tax"		29,042 29	
			43,722 03
WATER 1916 LOAN SINKING FUND.			
From interest on stock in fund		$120,005 24	
From City Collector, by tax levy		71,382 61	
			191,387 85
Amount carried forward			$491,259 31

No. 1.

THE MAYOR AND CITY COUNCIL OF BALTIMORE. CR.

GENERAL SINKING FUND.		
For purchase of $35,000 General Fund Bonds ¼ of 1% 1955 Loan	$35,000 00	
For purchase of $55,100 Consolidated 3½% 1930 Loan	50,976 11	
For purchase of $13,500 Funding 3½% 1936 Loan	12,633 19	
For purchase of $14,500 Public Improvement 3½% 1940 Loan	13,471 23	
For purchase of $400 Paving 4% 1920 Loan	399 96	
For purchase of $2,500 Harford Run 4% 1920 Loan	2,522 62	
For purchase of $70,000 Paving 4% 1951 Loan	67,353 22	
For purchase of $33,100 New Sewerage Improvement 4% 1961 Loan	31,304 64	
For purchase of $14,200 Funding 5% 1916 Loan	14,714 58	
For purchase of $2,100 Water 5% 1916 Loan	2,137 06	
For purchase of $9,000 School House 4% 1961 Loan	8,171 00	
For redemption, in part, Five Million 6% 1890 Loan	1,703 45	
		$240,387 06
PUBLIC PARK SINKING FUND NO. 2.		
For purchase of $15,000 Paving 4% 1951 Loan	$14,432 83	
For purchase of $10,000 Public Improvement 3½% 1940 Loan	9,357 91	
For purchase of $19,300 New Sewerage Improvement 4% 1961 Loan	17,993 85	
For purchase of $2,000 School House 4% 1961 Loan	1,815 78	
		43,600 37
WATER 1916 LOAN SINKING FUND.		
For purchase of $60,000 Paving 4% 1951 Loan	$57,731 34	
For purchase of $35,200 New Sewerage Improvement 4% 1961 Loan	32,578 19	
For purchase of $10,000 School House 4% 1961 Loan	9,078 89	
For purchase of $85,300 Water 5% 1916 Loan	88,236 06	
		187,624 48
Amount carried forward		$471,611 91

STATEMENT

DR. THE COMMISSIONERS OF FINANCE, IN ACCOUNT WITH

Amount brought forward..........................		$491,259 31

WATER 1922 LOAN SINKING FUND.

From interest on stock in fund..............	$20,445 76	
From City Collector, by tax levy............	17,845 66	
From sale of contents of the fund to Enoch Pratt Free Library Fund and the Water 4% 1922 stock held in the last-mentioned fund cancelled prior to its maturity......	500,000 00	
		538,291 42

WATER 1926 LOAN SINKING FUND.

From interest on stock in fund..............	$37,336 24	
From City Collector, by tax levy............	35,691 31	
		73,027 55

WATER 1943 LOAN SINKING FUND.

From interest on stock in fund..............	$6,509 00	
From Water Board, 1½% of gross receipts (annual contribution to the fund)........	21,614 43	
		28,123 43
Amount carried forward..........................		$1,130,701 71

No. 1—*Continued.*

THE MAYOR AND CITY COUNCIL OF BALTIMORE. CR.

Amount brought forward		$471,611 91
WATER 1922 LOAN SINKING FUND.		
For purchase of $5,000 Internal Improvement 3%½ 1928 Loan	$4,731 04	
For purchase of $8,000 Funding 3½% 1936 Loan	7,469 67	
For purchase of $15,000 Paving 4% 1951 Loan	14,432 83	
For purchase of $8,100 New Sewerage Improvement 4% 1961 Loan	7,499 55	
For purchase of $3,000 Funding 5% 1916 Loan	3,068 75	
For redemption of $500,000 Water 4% 1922 Loan (prior to maturity) held in Enoch Pratt Free Library Fund	500,000 00	
		537,201 84
For cash portion of Water 1922 Loan Sinking Fund covered into Enoch Pratt Free Library Fund in conformity to resolution of Commissioners of Finance, December 4, 1913		1,284 85
WATER 1926 LOAN SINKING FUND.		
For purchase of $34,000 General Fund Bonds ¼ of 1% 1955 Loan	$34,000 00	
For purchase of $2,100 Water 4% 1926 Loan	2,083 69	
For purchase of $20,000 Paving 4% 1951 Loan	19,243 78	
For purchase of $17,600 New Sewerage Imment 4% 1961 Loan	16,682 85	
		72,010 32
WATER 1943 LOAN SINKING FUND.		
For purchase of $12,000 Internal Improvement 3½% 1928 Loan	$11,438 33	
For purchase of $3,000 Public Improvement 3½% 1940 Loan	2,799 88	
For purchase of $1,500 W. M. R. R. 4% 1925 Loan	1,520 92	
For purchase of $500 Water 4% 1926 Loan	500 31	
For purchase of $11,800 New Sewerage Improvement 4% 1961 Loan	10,953 72	
		27,213 16
Amount carried forward		$1,109,322 08

STATEMENT

Dr. THE COMMISSIONERS OF FINANCE, IN ACCOUNT WITH

Amount brought forward		$1,130,701 71
WATER 1958 LOAN SINKING FUND.		
From interest on stock in fund	$7,258 00	
From forfeiture of 2% of bid for stock offered at public subscription, June 5, 1913	40 00	
		7,298 00
CONDUIT 1922 LOAN SINKING FUND.		
From interest on stock in fund	$19,786 00	
From City Collector, by tax levy	35,691 31	
		55,477 31
CONDUIT 1928 LOAN SINKING FUND.		
From interest on stock in fund	$13,779 75	
From City Collector, by tax levy	35,691 31	
		49,471 06
CONDUIT 1958 LOAN SINKING FUND.		
From interest on stock in fund	$1,892 00	
From City Comptroller	7,600 00	
		9,492 00
CONDUIT 1962 LOAN SINKING FUND.		
From interest on stock in fund		614 00
Amount carried forward		$1,253,054 08

No. 1—*Continued.*

THE MAYOR AND CITY COUNCIL OF BALTIMORE. CR.

Amount brought forward		$1,109,322 08

WATER 1958 LOAN SINKING FUND.

For purchase of $7,600 New Sewerage Improvement 4% 1961 Loan		7,140 26

CONDUIT 1922 LOAN SINKING FUND.

For purchase of $11,000 General Fund Bonds ¼ of 1% 1955 Loan	$11,000 00	
For purchase of $8,100 Public Improvement 3½% 1940 Loan	7,579 91	
For purchase of $14,000 Paving 4% 1951 Loan	13,470 64	
For purchase of $21,200 New Sewerage Improvement 4% 1961 Loan	19,730 24	
For purchase of $3,000 School House 4% 1961 Loan	2,723 67	
		54,504 46

CONDUIT 1928 LOAN SINKING FUND.

For purchase of $11,000 General Fund Bonds ¼ of 1% 1955 Loan	$11,000 00	
For purchase of $3,000 Public Improvement 3½% 1940 Loan	2,799 87	
For purchase of $10,000 Paving 4% 1951 Loan	9,621 89	
For purchase of $24,500 New Sewerage Improvement 4% 1961 Loan	22,681 40	
For purchase of $2,000 School House 4% 1961 Loan	1,815 78	
		47,918 94

CONDUIT 1958 LOAN SINKING FUND.

For purchase of $9 700 New Sewerage Improvement 4% 1961 Loan		9,058 82

CONDUIT 1962 LOAN SINKING FUND.

For purchase of $300 New Sewerage Improvement 4% 1961 Loan		274 17
Amount carried forward		$1,228,218 73

STATEMENT

DR. THE COMMISSIONERS OF FINANCE, IN ACCOUNT WITH

Amount brought forward		$1,253,054 08

INTERNAL IMPROVEMENT 1928 LOAN SINKING FUND.

From interest on stock in fund	$104,229 25	
From City Collector, by tax levy	107,073 91	
		211,303 16

FUNDING 1936 LOAN SINKING FUND.

From interest on stock in fund	$24,080 00	
From City Collector, by tax levy	35,691 31	
		59,771 31

PUBLIC IMPROVEMENT 1940 LOAN SINKING FUND.

From interest on stock in fund	$57,621 00	
From City Collector, by tax levy	71,382 60	
		129,003 60
Amount carried forward		$1,653,132 15

No. 1—*Continued.*

THE MAYOR AND CITY COUNCIL OF BALTIMORE. CR.

Amount brought forward		$1,228,218 73

INTERNAL IMPROVEMENT 1928 LOAN SINKING FUND.

For purchase of $80,000 General Fund Bonds ¼ of 1% 1955 Loan	$80,000 00	
For purchase of $40,800 Internal Improvement 3½% 1928 Loan	37,821 72	
For purchase of $5,000 Public Improvement 3½% 1940 Loan	4,520 56	
For purchase of $2,500 Refunding 3½% 1940 Loan	2,258 72	
For purchase of $60,000 Paving 4% 1951 Loan	57,731 34	
For purchase of $16,700 New Sewerage Improvement 4% 1961 Loan	16,076 79	
For purchase of $7,000 School House 4% 1961 Loan	6,355 22	
For purchase of $4,000 Water 5% 1916 Loan	4,060 56	
		208,824 91

FUNDING 1936 LOAN SINKING FUND.

For purchase of $26,000 General Fund Bonds ¼ of 1% 1955 Loan	$26,000 00	
For purchase of $1,800 Funding 3½% 1936 Loan	1,671 45	
For purchase of $12,000 Paving 4% 1951 Loan	11,546 27	
For purchase of $16,100 New Sewerage Improvement 4% 1961 Loan	15,150 31	
For purchase of $4,000 School House 4% 1961 Loan	3,631 55	
		57,999 58

PUBLIC IMPROVEMENT 1940 LOAN SINKING FUND.

For purchase of $21,000 General Fund Bonds ¼ of 1% 1955 Loan	$21,000 00	
For purchase of $90,600 Public Improvement 3½% 1940 Loan	83,532 52	
For purchase of $10,000 Paving 4% 1951 Loan	9,621 89	
For purchase of $11,700 New Sewerage Improvement 4% 1961 Loan	11,262 29	
For purchase of $2,000 School House 4% 1961 Loan	1,815 78	
		127,232 48
Amount carried forward		$1,622,275 70

STATEMENT

DR. THE COMMISSIONERS OF FINANCE, IN ACCOUNT WITH

Amount brought forward		$1,653,132 15

REFUNDING 1940 LOAN SINKING FUND.

From interest on stock in fund	$53,339 76	
From City Collector, by tax levy	71,382 61	
		124,722 37

FOUR MILLION 1945 LOAN SINKING FUND.

From interest on stock in fund	$21,806 00	
From City Collector, by tax levy	17,845 66	
		39,651 66

PAVING 1951 LOAN SINKING FUND.

From interest on stock in fund		4,590 00

ANNEX IMPROVEMENT 1951 LOAN SINKING FUND.

From interest on stock in fund		2,254 50

ANNEX IMPROVEMENT 1954 LOAN SINKING FUND.

From interest on stock in fund		7,520 00
Amount carried forward		$1,831,870 68

No. 1—*Continued.*

THE MAYOR AND CITY COUNCIL OF BALTIMORE. Cr.

Amount brought forward		$1,622,275 70

REFUNDING 1940 LOAN SINKING FUND.

For purchase of $45,000 General Fund Bonds ¼ of 1% 1955 Loan	$45,000 00	
For purchase of $33,300 Refunding 3½% 1940 Loan	30,566 64	
For purchase of $30,000 Paving 4% 1951 Loan.	28,865 67	
For purchase of $14,500 New Sewerage Improvement 4% 1961 Loan	13,958 02	
For purchase of $5,000 School House 4% 1961 Loan	4,539 45	
		122,929 78

FOUR MILLION 1945 LOAN SINKING FUND.

For purchase of $4,000 Public Improvement 3½% 1940 Loan	$3,743 17	
For purchase of $12,000 Four Million 3½% 1945 Loan	10,892 55	
For purchase of $10,000 Paving 4% 1951 Loan.	9,621 89	
For purchase of $13,900 New Sewerage Improvement 4% 1961 Loan	13,010 33	
For purchase of $2,000 School House 4% 1961 Loan	1,815 78	
		39,083 72

PAVING 1951 LOAN SINKING FUND.

For purchase of $4,700 New Sewerage Improvement 4% 1961 Loan		4,417 19

ANNEX IMPROVEMENT 1951 LOAN SINKING FUND.

For purchase of $2,100 New Sewerage Improvement 4% 1961 Loan		1,967 69

ANNEX IMPROVEMENT 1954 LOAN SINKING FUND.

For purchase of $7,800 New Sewerage Improvement 4% 1961 Loan		7,323 04
Amount carried forward		$1,797,997 12

STATEMENT

Dr. THE COMMISSIONERS OF FINANCE, IN ACCOUNT WITH

Amount brought forward		$1,831,870 68
BURNT DISTRICT IMPROVEMENT 1954 LOAN SINKING FUND.		
From interest on stock in fund	$26,121 99	
From City Collector, by tax levy	71,382 61	
		97,504 60
BURNT DISTRICT IMPROVEMENT 1960 LOAN SINKING FUND		
From interest on stock in fund		1,168 50
PUBLIC PARK IMPROVEMENT 1955 LOAN SINKING FUND.		
From interest on stock in fund	$2,685 50	
From Park Board, annual sinking fund provision	8,800 00	
		11,485 50
NEW ENGINE HOUSE 1957 LOAN SINKING FUND.		
From interest on stock in fund	$2,924 50	
From City Comptroller	8,800 00	
		11,724 50
NEW SCHOOL HOUSE 1957 LOAN SINKING FUND.		
From interest on stock in fund	$2,924 50	
From City Comptroller	8,800 00	
		11,724 50
SCHOOL HOUSE 1961 LOAN SINKING FUND.		
From interest on stock in fund	$1,273 00	
From City Comptroller	11,400 00	
		12,673 00
JONES' FALLS IMPROVEMENT 1961 LOAN SINKING FUND.		
From interest on stock in fund	$738 00	
From City Comptroller	7,600 00	
		8,338 00
Amount carried forward		$1,986,489 28

No. 1—*Continued.*

THE MAYOR AND CITY COUNCIL OF BALTIMORE. CR.

Amount brought forward		$1,797,997 12
BURNT DISTRICT IMPROVEMENT 1954 LOAN SINKING FUND.		
For purchase of $37,000 General Fund Bonds ¼ of 1% 1955 Loan	$37,000 00	
For purchase of $3,000 Public Improvement 3½% 1940 Loan	2,807 38	
For purchase of $24,000 Paving 4% 1951 Loan.	23,092 53	
For purchase of $31,200 New Sewerage Improvement 4% 1961 Loan	29,141 58	
For purchase of $4,000 School House 4% 1961 Loan	3,631 55	
		95,673 04
BURNT DISTRICT IMPROVEMENT 1960 LOAN SINKING FUND		
For purchase of $1,100 New Sewerage Improvement 4% 1961 Loan		1,030 15
PUBLIC PARK IMPROVEMENT 1955 LOAN SINKING FUND.		
For purchase of $12,100 New Sewerage Improvement 4% 1961 Loan		11,155 11
NEW ENGINE HOUSE 1957 LOAN SINKING FUND.		
For purchase of $12,200 New Sewerage Improvement 4% 1961 Loan		11,246 50
NEW SCHOOL HOUSE 1957 LOAN SINKING FUND.		
For purchase of $12,200 New Sewerage Improvement 4% 1961 Loan		11,246 50
SCHOOL HOUSE 1961 LOAN SINKING FUND.		
For purchase of $3,000 Public Improvement 3½% 1940 Loan	$2,799 88	
For purchase of $10,600 New Sewerage Improvement 4% 1961 Loan	9,760 62	
		12,560 50
JONES' FALLS IMPROVEMENT 1961 LOAN SINKING FUND.		
For purchase of $4,000 Public Improvement 3½% 1940 Loan	$3,743 16	
For purchase of $4,600 New Sewerage Improvement 4% 1961 Loan	4,228 14	
		7,971 30
Amount carried forward		$1,948,880 22

STATEMENT

Dr. THE COMMISSIONERS OF FINANCE, IN ACCOUNT WITH

Amount brought forward			$1,986,489 28
DOCK IMPROVEMENT 1961 LOAN SINKING FUND.			
From interest on stock in fund			1,808 00
NEW SEWERAGE IMPROVEMENT 1961 LOAN SINKING FUND.			
From interest on stock in fund		$5,107 75	
From City Comptroller	$76,000 00		
Less anticipated payment made in 1912	31,000 00		
		45,000 00	
			50,107 75
NEW SEWERAGE IMPROVEMENT 1980 LOAN SINKING FUND.			
From interest on stock in fund			12,104 00
WESTERN MARYLAND RAILROAD SINKING FUND.			
From interest on stock in fund		$6,809 50	
From interest on "Certificates of Deposit," in fund		138,547 50	
			145,357 00
HORWITZ BENEVOLENT FUND.			
From interest on stock in fund			742 74
FREDERICK RAINE FUND.			
From interest on stock in fund			14 00
Amount carried forward			$2,196,622 77

No 1—*Continued.*

THE MAYOR AND CITY COUNCIL OF BALTIMORE. CR.

Amount brought forward		$1,948,880 22

DOCK IMPROVEMENT 1961 LOAN SINKING FUND.

For purchase of $1,400 New Sewerage Improvement 4% 1961 Loan		1,303 70

NEW SEWERAGE IMPROVEMENT 1961 LOAN SINKING FUND.

For purchase of $27,000 Public Improvement 3½% 1940 Loan	$25,178 40	
For purchase of $300 Refunding 3½% 1940 Loan	279 91	
For purchase of $26,200 New Sewerage Improvement 4% 1961 Loan	24,162 24	
		49,620 55

NEW SEWERAGE IMPROVEMENT 1980 LOAN SINKING FUND.

For purchase of $12,500 New Sewerage Improvement 4% 1961 Loan		11,739 61

WESTERN MARYLAND RAILROAD SINKING FUND.

For one year's interest on W. M. R. R. 3¼% 1927 Loan	$55,380 00	
For one year's interest on W. M. R. R. 3½% 1950 Loan	30,625 00	
For one year's interest on W. M. R. R. 3½% 1952 Loan	35,000 00	
For one year's interest on W. M. R. R. 4% 1925 Loan	27,360 00	
		148,365 00

HORWITZ BENEVOLENT FUND.

For third distribution of income in aid of the support of twelve poor families of the City of Baltimore		742 80

FREDERICK RAINE FUND.

For one gold medal, account Maryland Institute	$7 00	
For one gold medal, account Board of School Commissioners	7 00	
		14 00
Amount carried forward		$2,160,665 88

STATEMENT

DR. THE COMMISSIONERS OF FINANCE, IN ACCOUNT WITH

Amount brought forward		$2,196,622 77
ENOCH PRATT FREE LIBRARY FUND.		
From interest on stock in fund	$45,742 00	
From Mayor and City Council to supply the deficiency in the income of the fund to pay annuity of $50,000	4,258 00	
From Commissioners of Finance for redemption of $500,000 Water 4% 1922 stock prior to its maturity, in accordance with the resolution of the Commissioners of Finance, December 4, 1913	500,000 00	
From Commissioners of Finance, the cash remaining in Water 1922 Loan Sinking Fund after the redemption of Water 4% 1922 stock, heretofore held in Enoch Pratt Free Library Fund, in conformity to the resolution of the Commissioners of Finance, December 4, 1913	1,284 85	
		551,284 85
		$2,747,907 62

No. 1—*Continued.*

THE MAYOR AND CITY COUNCIL OF BALTIMORE. CR.

Amount brought forward		$2,160,665 88
ENOCH PRATT FREE LIBRARY FUND.		
For annuity	$50,000 00	
For purchase of $22,600 Water 5% 1916 Loan	500,000 00	
For purchase of $3,000 Funding 5% 1916 Loan		
For purchase of $4,000 W. M. R. R. 4% 1925 Loan		
For purchase of $21,100 Paving 4% 1951 Loan		
For purchase of $8,100 New Sewerage Improvement 4% 1961 Loan		
For purchase of $38,000 Conduit 3½% 1922 Loan		
For purchase of $25,300 Conduit 3½% 1928 Loan		
For purchase of $5,000 Internal Improvement 3½% 1928 Loan		
For purchase of $8,000 Funding 3½% 1936 Loan		
For purchase of $161,700 Public Improvement 3½% 1940 Loan		
For purchase of $15,000 Refunding 3½% 1940 Loan		
For purchase of $24,500 Water 3½% 1943 Loan		
For purchase of $56,600 Four Million 3½% 1945 Loan		
For purchase of $10,000 W. M. R. R. 3½% 1950 Loan		
For purchase of $83,100 Burnt District Improvement 3½% 1954 Loan		
For purchase of $101,100 New Sewerage Improvement 3½% 1980 Loan		
For purchase of $13,900 W. M. R. R. 3¼% 1927 Loan		
		550,000 00
BY CASH BALANCE, December 31, 1913		37,241 74
		$2,747,907 62

RECAPITULATION.

STATEMENT NO. 1—RECEIPTS.

SINKING FUNDS.	Interest on Stock and Investments.	City Collector by Tax Levy.	Interest on Deposits.	Sale of Contents of Water 1922 Loan Sinking Fund.	Park Board "Park Tax."	Water Board 1½% of Gross Receipts.	Premium on Sales of Stock.	Account of Fixed Sinking Fund Contributions.	Enoch Pratt Free Library Fund Deficiency.	Ground Rents.	Public Park 1955 Loan Sinking Fund.	Redemption Water 4% 1922 Loan.
General Sinking Fund	$141,055 20	$62,459 78	$4,375 52							$32,027 36		
Public Park Sinking Fund No. 2	14,679 74				$29,042 29							
Water 1916 Loan	120,005 24	71,382 61										
Water 1922 Loan	20,445 76	17,845 66		$500,000 00								
Water 1926 Loan	37,336 24	35,691 31										
Water 1943 Loan	6,509 00					$21,614 43						
Water 1958 Loan	7,258 00						$40 00					
Conduit 1922 Loan	19,786 00	35,691 31										
Conduit 1928 Loan	13,779 75	35,691 31										
Conduit 1958 Loan	1,892 00							$7,600 00				
Conduit 1962 Loan	614 00											
Internal Improvement 1928 Loan	104,229 25	107,073 91										
Funding 1936 Loan	24,080 00	35,691 31										
Public Improvement 1940 Loan	57,621 00	71,382 60										
Refunding 1940 Loan	53,339 76	71,382 61										
Four Million 1945 Loan	21,806 00	17,845 66										
Annex Improvement 1951 Loan	2,254 50											
Annex Improvement 1954 Loan	7,520 00											
Paving 1951 Loan	4,590 00											
Burnt District Improvement 1954 Loan	26,121 99	71,382 61										
Burnt District Improvement 1960 Loan	1,168 50											
Public Park Improvement 1955 Loan	2,685 50										$8,800 00	
New Engine House 1957 Loan	2,924 50							8,800 00				
New School House 1957 Loan	2,924 50							8,800 00				
School House 1961 Loan	1,273 00							11,400 00				
Jones' Falls Improvement 1961 Loan	738 00							7,600 00				
Dock Improvement 1961 Loan	1,808 00											
New Sewerage Improvement 1961 Loan	5,107 75							45,000 00				
New Sewerage Improvement 1980 Loan	12,104 00											
W. M. R. R. Sinking Fund	145,357 00											
	$861,014 18	$633,520 68	$4,375 52	$500,000 00	$29,042 29	$21,614 43	$40 00	$89,200 00		$32,027 36	$8,800 00	
Enoch Pratt Free Library Fund	45,742 00								$4,258 00			$501,284 85
Frederick Raine Fund	14 00											
Horwitz Benevolent Fund	742 74											
	$907,512 92	$633,520 68	$4,375 52	$500,000 00	$29,042 29	$21,614 43	$40 00	$89,200 00	$4,258 00	$32,027 36	$8,800 00	$501,284 85

RECAPITULATION.

STATEMENT No. 1—PAYMENTS.

SINKING FUNDS	Cost of Stock Purchased.	Interest W. M. R. R. 1927 Loan.	Interest W. M. R. R. 1950 Loan.	Interest W. M. R. R. 1952 Loan.	Interest W. M. R. R. 1925 Loan.	Redemption Five Million 6% 1890 Loan.	Redemption Water 4% 1922 Loan.	Balance Covered into Enoch Pratt Free Library Fund.	Enoch Pratt Free Library. Annuity.	Board of School Commissioners.	Maryland Institute.	Horwitz Benevolent Fund, Distribution of Income to the Poor.
General Sinking Fund	$238,683 01					$1,703 45						
Public Park Sinking Fund No. 2	43,600 37											
Water 1916 Loan	187,624 48											
Water 1922 Loan	37,201 84						$500,000 00	$1,284 85				
Water 1926 Loan	72,010 32											
Water 1943 Loan	27,213 16											
Water 1958 Loan	7,140 26											
Conduit 1922 Loan	54,504 46											
Conduit 1928 Loan	47,918 94											
Conduit 1958 Loan	9,058 82											
Conduit 1962 Loan	274 17											
Internal Improvement 1928 Loan	208,824 91											
Funding 1936 Loan	57,999 58											
Public Improvement 1940 Loan	127,232 48											
Refunding 1940 Loan	122,929 78											
Four Million 1945 Loan	39,083 72											
Paving 1951 Loan	4,417 19											
Annex Improvement 1951 Loan	1,967 69											
Annex Improvement 1954 Loan	7,323 04											
Burnt District Improvement 1954 Loan	95,673 04											
Burnt District Improvement 1960 Loan	1,030 15											
Public Park Improvement 1955 Loan	11,155 11											
New Engine House 1957 Loan	11,246 50											
New School House 1957 Loan	11,246 50											
School House 1961 Loan	12,560 50											
Jones' Falls Improvement 1961 Loan	7,971 30											
Dock Improvement 1961 Loan	1,303 70											
New Sewerage Improvement 1961 Loan	49,620 55											
New Sewerage Improvement 1980 Loan	11,739 61											
W. M. R. R. Sinking Fund		$55,380 00	$30,625 00	$35,000 00	$27,360 00							
Enoch Pratt Free Library Fund	500,000 00								$50,000 00			
Frederick Raine Fund										$7 00	$7 00	
Horwitz Benevolent Fund												$742 68
	$2,008,555 78	$55,380 00	$30,625 00	$35,000 00	$27,360 00	$1,703 45	$500,000 00	$1,284 85	$50,000 00	$7 00	$7 00	$742 68

STATEMENT No. 2.

STOCKS PURCHASED FOR SINKING FUNDS AS REQUIRED BY SECTION 13, ARTICLE 47, CITY CODE, 1893.

DATE.	SINKING FUND.	AMOUNT STOCK PURCHASED.	DESCRIPTION OF STOCK.	AMOUNT PAID.
1913				
Jan. 6.......	Refunding 1940 Loan.....	$3,300 00	Refunding 3½% 1940 Loan...........	$2,946 85
Jan. 6.......	Public Impt. 1940 Loan...	300 00	Public Impt. 3½% 1940 Loan.........	267 90
Jan. 6.......	Four Million 1945 Loan...	1,900 00	Four Million 3½% 1945 Loan.........	1,718 84
Jan. 7.......	Internal Impt. 1928 Loan..	1,600 00	Internal Impt. 3½% 1928 Loan.......	1,476 78
Jan. 7.......	General Sinking Fund....	2,500 00	Consolidated 3½% 1930 Loan.........	2,294 96
Jan. 9.......	General Sinking Fund....	400 00	Consolidated 3½% 1930 Loan.........	367 31
Jan. 15.......	Water 1916 Loan.........	3,000 00	Water 5% 1916 Loan................	3,105 83
Jan. 16.......	Four Million 1945 Loan...	10,000 00	Four Million 3½% 1945 Loan.........	9,081 25
Jan. 16.......	Public Impt. 1940 Loan...	24,000 00	Public Impt. 3½% 1940 Loan.........	21,755 00
Jan. 16.......	Refunding 1940 Loan.....	5,000 00	Refunding 3½% 1940 Loan...........	4,532 29
Jan. 20.......	Public Impt. 1940 Loan....	1,000 00	Public Impt. 3½% 1940 Loan.........	906 84
Jan. 20.......	General Sinking Fund....	7,400 00	Funding 5% 1916 Loan...............	7,666 20
Jan. 20.......	Water 1916 Loan.........	31,500 00	Water 5% 1916 Loan................	32,633 12
Jan. 24.......	Water 1926 Loan.........	1,000 00	Water 4% 1926 Loan................	994 22
Jan. 24.......	Water 1916 Loan.........	33,900 00	Water 5% 1916 Loan................	35,138 28
Jan. 24.......	General Sinking Fund....	6,800 00	Funding 5% 1916 Loan..............	7,048 38
Jan. 28.......	Water 1926 Loan.......	600 00	Water 4% 1926 Loan................	596 80
Jan. 28.......	Water 1916 Loan.......	2,400 00	Water 5% 1916 Loan................	2,489 00
Jan. 30.......	General Sinking Fund....	400 00	Paving 4% 1920 Loan................	399 96
Jan. 31.......	Internal Impt. 1928 Loan..	6,600 00	Internal Impt. 3½% 1928 Loan........	6,173 75
Jan. 31.......	General Sinking Fund....	1,100 00	Consolidated 3½% 1930 Loan.........	1,020 71
Jan. 31.......	General Sinking Fund....	900 00	Consolidated 3½% 1930 Loan.........	826 13
	Carried forward.......	$145,600 00	*Carried forward*..................	$143,440 40

STATEMENT No 2—*Continued.*

STOCKS PURCHASED FOR SINKING FUNDS AS REQUIRED BY SECTION 13, ARTICLE 47, CITY CODE, 1893.

Date.	Sinking Fund.	Amount Stock Purchased.	Description of Stock.	Amount Paid.
1913	*Brought forward*	$145,600 00	*Brought forward*	$143,440 40
Jan. 31	Four Million 1945 Loan	100 00	Four Million 3½% 1945 Loan	92 46
Feb. 4	Water 1926 Loan	500 00	Water 4% 1926 Loan	492 67
Feb. 7	Refunding 1940 Loan	25,000 00	Refunding 3½% 1940 Loan	23,087 50
Feb. 7	Public Impt. 1940 Loan	13,200 00	Public Impt. 3½% 1940 Loan	12,190 20
Feb. 17	General Sinking Fund	4,900 00	Consolidated 3½% 1930 Loan	4,603 41
Feb. 20	Water 1916 Loan	700 00	Water 5% 1916 Loan	727 23
Feb. 20	Internal Impt. 1928 Loan	200 00	Internal Impt. 3½% 1928 Loan	186 95
Feb. 20	General Sinking Fund	1,700 00	Consolidated 3½% 1930 Loan	1,589 10
Feb. 21	Internal Impt. 1928 Loan	19,300 00	Internal Impt. 3½% 1928 Loan	18,091 07
Feb. 25	General Sinking Fund	3,000 00	Consolidated 3½% 1930 Loan	2,805 75
Mar. 3	Internal Impt. 1928 Loan	500 00	Internal Impt. 3½% 1928 Loan	469 26
Mar. 3	General Sinking Fund	7,200 00	Consolidated 3½% 1930 Loan	6,757 30
Mar. 3	Funding 1936 Loan	1,800 00	Funding 3½% 1936 Loan	1,671 45
Mar. 3	Public Impt. 1940 Loan	1,000 00	Public Impt. 3½% 1940 Loan	928 53
Mar. 3	General Sinking Fund	35,000 00	Gen'l Fund Bonds ¼ of 1% 1955 Loan	35,000 00
Mar. 7	Water 1926 Loan	34,000 00	Gen'l Fund Bonds ¼ of 1% 1955 Loan	34,000 00
Mar. 7	Conduit 1922 Loan	11,000 00	Gen'l Fund Bonds ¼ of 1% 1955 Loan	11,000 00
Mar. 7	Conduit 1928 Loan	11,000 00	Gen'l Fund Bonds ¼ of 1% 1955 Loan	11,000 00
Mar. 7	Internal Impt. 1928 Loan	80,000 00	Gen'l Fund Bonds ¼ of 1% 1955 Loan	80,000 00
Mar. 7	Funding 1936 Loan	26,000 00	Gen'l Fund Bonds ¼ of 1% 1955 Loan	26,000 00
Mar. 7	Public Impt. 1940 Loan	21,000 00	Gen'l Fund Bonds ¼ of 1% 1955 Loan	21,000 00
Mar. 7	Refunding 1940 Loan	45,000 00	Gen'l Fund Bonds ¼ of 1% 1955 Loan	45,000 00

Mar. 7.......	Burnt Dist. Impt. 1954 Loan	37,000 00	Gen'l Fund Bonds ¼ of 1% 1955 Loan.	37,000 00
Mar. 20.......	Public Impt. 1940 Loan....	50,000 00	Public Impt. 3½% 1940 Loan........	46,509 03
April 15.......	Water 1943 Loan.........	500 00	Water 4% 1926 Loan...............	500 31
April 15.......	Water 1943 Loan.........	1,500 00	W. M. R. R. 4% 1925 Loan...........	1,520 92
April 17.......	General Sinking Fund....	2,000 00	Harford Run 4% 1920 Loan..........	2,028 33
April 21.......	Water 1943 Loan.........	12,000 00	Internal Impt. 3½% 1928 Loan.......	11,438 33
April 22.......	General Sinking Fund....	13,500 00	Funding 3½% 1936 Loan.............	12,633 19
April 22.......	General Sinking Fund....	10,000 00	Public Impt. 3½% 1940 Loan........	9,357 92
April 22.......	Public Pk. Sink. Fund No. 2	10,000 00	Public Impt. 3½% 1940 Loan........	9,357 91
April 22.......	Burnt Dist. Impt. 1954 Loan	3,000 00	Public Impt. 3½% 1940 Loan........	2,807 38
April 22.......	Four Million 1945 Loan...	4,000 00	Public Impt. 3½% 1940 Loan........	3,743 17
April 22.......	Jones' Falls Impt. 1961 Loan	4,000 00	Public Impt. 3½% 1940 Loan........	3,743 16
April 22.......	Conduit 1922 Loan........	8,100 00	Public Impt. 3½% 1940 Loan........	7,579 91
April 22.......	**School House 1961 Loan..**	3,000 00	Public Impt. 3½% 1940 Loan........	2,799 88
April 22.......	Conduit 1928 Loan........	3,000 00	Public Impt. 3½% 1940 Loan........	2,799 87
April 22.......	Water 1943 Loan.........	3,000 00	Public Impt. 3½% 1940 Loan........	2,799 88
April 22.......	New Sew. Impt 1961 Loan	15,400 00	Public Impt. 3½% 1940 Loan........	14,372 69
April 28.......	Internal Impt. 1928 Loan..	500 00	Internal Impt. 3½% 1928 Loan.......	476 94
April 28.......	General Sinking Fund....	2,200 00	Consolidated 3½% 1930 Loan.........	2,093 03
April 29.......	General Sinking Fund....	4,400 00	Consolidated 3½% 1930 Loan.........	4,186 48
May 2.......	New Sew. Impt. 1961 Loan	4,600 00	Public Impt. 3½% 1940 Loan........	4,274 61
May 2.......	New Sew. Impt. 1961 Loan	7,000 00	Public Impt. 3½% 1940 Loan........	6,531 10
May 2.......	New Sew. Impt. 1961 Loan	300 00	Refunding 3½% 1940 Loan...........	279 91
May 8.......	Water 1916 Loan.........	700 00	Water 5% 1916 Loan...............	718 18
May 12.......	Water 1916 Loan.........	200 00	Water 5% 1916 Loan...............	205 31
May 15.......	General Sinking Fund....	7,500 00	Consolidated 3½% 1930 Loan.........	7,128 96
May 22.......	Water 1916 Loan.........	2,000 00	Water 5% 1916 Loan...............	2,045 83
May 22.......	Water 1922 Loan.........	3,000 00	Funding 5% 1916 Loan..............	3,068 75
May 22.......	Water 1922 Loan.........	5,000 00	Internal Impt. 3½% 1928 Loan.......	4,731 04
May 22.......	Water 1922 Loan.........	8,000 00	Funding 3½% 1936 Loan.............	7,469 67
May 28.......	Water 1916 Loan.........	1,000 00	Water 5% 1916 Loan...............	1,023 75
	Carried forward.......	$714,100 00	*Carried forward*..................	$695,458 72

STATEMENT No. 2—*Continued.*

STOCKS PURCHASED FOR SINKING FUNDS AS REQUIRED BY SECTION 13, ARTICLE 47, CITY CODE, 1893.

DATE.	SINKING FUND.	AMOUNT STOCK PURCHASED.	DESCRIPTION OF STOCK.	AMOUNT PAID.
1913	*Brought forward*	$714,100 00	*Brought forward*	$695,458 72
June 6	Public Pk. Sink. Fund No. 2	12,000 00	New Sewerage Impt. 4% 1961 Loan	10,966 67
June 6	Burnt Dist. Impt. 1954 Loan	18,300 00	New Sewerage Impt. 4% 1961 Loan	16,724 16
June 6	Annex Impt. 1951 Loan	1,100 00	New Sewerage Impt. 4% 1961 Loan	1,005 28
June 6	Conduit 1962 Loan	300 00	New Sewerage Impt. 4% 1961 Loan	274 17
June 6	Paving 1951 Loan	2,200 00	New Sewerage Impt. 4% 1961 Loan	2,010 55
June 6	Four Million 1945 Loan	7,600 00	New Sewerage Impt. 4% 1961 Loan	6,945 56
June 6	Jones' Falls Impt. 1961 Loan	4,100 00	New Sewerage Impt. 4% 1961 Loan	3,746 94
June 6	Conduit 1922 Loan	13,900 00	New Sewerage Impt. 4% 1961 Loan	12,703 06
June 6	School House 1961 Loan	9,100 00	New Sewerage Impt. 4% 1961 Loan	8,316 39
June 6	Funding 1936 Loan	7,100 00	New Sewerage Impt. 4% 1961 Loan	6,488 61
June 6	Conduit 1958 Loan	5,700 00	New Sewerage Impt. 4% 1961 Loan	5,209 17
June 6	Conduit 1928 Loan	18,500 00	New Sewerage Impt. 4% 1961 Loan	16,906 94
June 6	Public Pk. Impt. 1955 Loan	10,100 00	New Sewerage Impt. 4% 1961 Loan	9,230 28
June 6	Water 1922 Loan	6,100 00	New Sewerage Impt. 4% 1961 Loan	5,574 72
June 6	New Eng. House 1957 Loan	10,200 00	New Sewerage Impt. 4% 1961 Loan	9,321 67
June 6	Water 1943 Loan	8,300 00	New Sewerage Impt. 4% 1961 Loan	7,585 28
June 6	New Schl. House 1957 Loan	10,200 00	New Sewerage Impt. 4% 1961 Loan	9,321 67
June 6	Water 1926 Loan	5,300 00	New Sewerage Impt. 4% 1961 Loan	4,843 61
June 6	Water 1958 Loan	3,600 00	New Sewerage Impt. 4% 1961 Loan	3,290 00
June 6	Annex Impt. 1954 Loan	3,800 00	New Sewerage Impt. 4% 1961 Loan	3,472 78
June 6	Dock Impt. 1961 Loan	900 00	New Sewerage Impt. 4% 1961 Loan	822 50
June 6	Water 1916 Loan	26,800 00	New Sewerage Impt. 4% 1961 Loan	24,492 22
June 6	Burnt Dist. Impt. 1960 Loan	600 00	New Sewerage Impt. 4% 1961 Loan	548 33

June	6	New Sew. Impt. 1980 Loan	6,000 00	New Sewerage Impt. 4% 1961 Loan	5,483 33
June	6	New Sew. Impt. 1961 Loan	21,700 00	New Sewerage Impt. 4% 1961 Loan	19,831 39
June	6	General Sinking Fund	11,500 00	New Sewerage Impt. 4% 1961 Loan	10,509 72
July	3	Water 1916 Loan	2,300 00	Water 5% 1916 Loan	2,348 56
July	10	Internal Impt. 1928 Loan	10,000 00	Internal Impt. 3½% 1928 Loan	9,033 75
July	10	General Sinking Fund	11,000 00	Consolidated 3½% 1930 Loan	9,854 63
July	14	Water 1916 Loan	2,000 00	Water 5% 1916 Loan	2,045 28
July	15	General Sinking Fund	1,800 00	Consolidated 3½% 1930 Loan	1,604 46
July	25	General Sinking Fund	1,000 00	Consolidated 3½% 1930 Loan	894 73
July	25	Internal Impt. 1928 Loan	200 00	Internal Impt. 3½% 1928 Loan	180 95
July	28	Water 1916 Loan	2,000 00	Water 5% 1916 Loan	2,049 17
Aug.	8	Water 1916 Loan	1,000 00	Water 5% 1916 Loan	1,025 97
Aug.	11	Water 1916 Loan	700 00	Water 5% 1916 Loan	720 22
Aug.	11	Public Impt. 1940 Loan	1,100 00	Public Impt. 3½% 1940 Loan	975 02
Aug.	13	General Sinking Fund	3,000 00	Consolidated 3½% 1930 Loan	2,689 17
Aug.	19	General Sinking Fund	1,000 00	Consolidated 3½% 1930 Loan	899 67
Aug.	20	General Sinking Fund	600 00	Consolidated 3½% 1930 Loan	539 86
Aug.	20	Internal Impt. 1928 Loan	600 00	Internal Impt. 3½% 1928 Loan	544 36
Aug.	22	Water 1916 Loan	1,000 00	Water 5% 1916 Loan	1,029 17
Sept.	9	Internal Impt. 1928 Loan	5,000 00	Public Impt. 3½% 1940 Loan	4,520 56
Sept.	10	General Sinking Fund	100 00	Consolidated 3½% 1930 Loan	89 93
Sept.	15	Water 1916 Loan	300 00	Water 5% 1916 Loan	309 33
Sept.	17	General Sinking Fund	500 00	Harford Run 4% 1920 Loan	494 29
Oct.	1	General Sinking Fund	100 00	Consolidated 3½% 1930 Loan	90 26
Oct.	14	Water 1916 Loan	600 00	Water 5% 1916 Loan	621 83
Oct.	23	Internal Impt. 1928 Loan	4,000 00	Water 5% 1916 Loan	4,060 56
Oct.	24	Internal Impt. 1928 Loan	2,500 00	Refunding 3½% 1940 Loan	2,258 72
Oct.	27	Internal Impt. 1928 Loan	1,300 00	Internal Impt. 3½% 1928 Loan	1,187 91
Oct.	29	General Sinking Fund	4,500 00	Public Impt. 3½% 1940 Loan	4,113 31
Oct.	30	General Sinking Fund	1,000 00	Water 5% 1916 Loan	1,017 50
Nov.	3	General Sinking Fund	1,100 00	Water 5% 1916 Loan	1,119 56
		Carried forward	$999,400 00	*Carried forward*	$957,302 45

STATEMENT No. 2—*Continued.*

STOCKS PURCHASED FOR SINKING FUNDS AS REQUIRED BY SECTION 13, ARTICLE 47, CITY CODE, 1893.

DATE.		SINKING FUND.	AMOUNT STOCK PURCHASED.	DESCRIPTION OF STOCK.	AMOUNT PAID.
	1913	*Brought forward*	$999,400 00	*Brought forward*	$957,302 45
Nov	6	**General Sinking Fund**	700 00	Consolidated 3½% 1930 Loan	640 26
Nov.	12	General Sinking Fund	9,000 00	School House 4% 1961 Loan	8,171 00
Nov.	12	Public Pk. Sink. Fund No. 2	2,000 00	School House 4% 1961 Loan	1,815 78
Nov.	12	Burnt Dist. Impt. 1954 Loan	4,000 00	School House 4% 1961 Loan	3,631 55
Nov.	12	Public Impt. 1940 Loan	2,000 00	School House 4% 1961 Loan	1,815 78
Nov.	12	Internal Impt. 1928 Loan	7,000 00	School House 4% 1961 Loan	6,355 22
Nov.	12	Refunding 1940 Loan	5,000 00	School House 4% 1961 Loan	4,539 45
Nov.	12	Four Million 1945 Loan	2,000 00	School House 4% 1961 Loan	1,815 78
Nov.	12	Conduit 1922 Loan	3,000 00	School House 4% 1961 Loan	2,723 67
Nov.	12	Funding 1936 Loan	4,000 00	School House 4% 1961 Loan	3,631 55
Nov.	12	Conduit 1928 Loan	2,000 00	School House 4% 1961 Loan	1,815 78
Nov.	12	Water 1916 Loan	10,000 00	School House 4% 1961 Loan	9,078 89
Dec.	6	General Sinking Fund	70,000 00	Paving 4% 1951 Loan	67,353 22
Dec.	6	Public Pk. Sink. Fund No. 2	15,000 00	Paving 4% 1951 Loan	14,432 83
Dec.	6	Burnt Dist. Impt. 1954 Loan	24,000 00	Paving 4% 1951 Loan	23,092 53
Dec.	6	Public Impt. 1940 Loan	10,000 00	Paving 4% 1951 Loan	9,621 89
Dec.	6	Internal Impt. 1928 Loan	60,000 00	Paving 4% 1951 Loan	57,731 34
Dec.	6	Refunding 1940 Loan	30,000 00	Paving 4% 1951 Loan	28,865 67
Dec.	6	Four Million 1945 Loan	10,000 00	Paving 4% 1951 Loan	9,621 89
Dec.	6	Conduit 1922 Loan	14,000 00	Paving 4% 1951 Loan	13,470 64
Dec.	6	Funding 1936 Loan	12,000 00	Paving 4% 1951 Loan	11,546 27
Dec.	6	Conduit 1928 Loan	10,000 00	Paving 4% 1951 Loan	9,621 89
Dec.	6	Water 1926 Loan	20,000 00	Paving 4% 1951 Loan	19,243 78
Dec.	6	Water 1922 Loan	15,000 00	Paving 4% 1951 Loan	14,432 83

Dec.	6.......	Water 1916 Loan.........	60,000 00	Paving 4% 1951 Loan................	57,731 34
Dec.	8.......	General Sinking Fund....	16,000 00	New Sewerage Impt. 4% 1961 Loan...	15,398 58
Dec.	8.......	Public Pk. Sink. Fund No. 2	6,000 00	New Sewerage Impt. 4% 1961 Loan...	5,774 46
Dec.	8.......	Water 1916 Loan.........	7,000 00	New Sewerage Impt. 4% 1961 Loan...	6,736 88
Dec.	8.......	Water 1922 Loan.........	2,000 00	New Sewerage Impt. 4% 1961 Loan...	1,924 83
Dec.	8.......	Conduit 1922 Loan........	6,000 00	New Sewerage Impt. 4% 1961 Loan...	5,774 46
Dec.	8.......	Water 1926 Loan.........	11,000 00	New Sewerage Impt. 4% 1961 Loan...	10,586 52
Dec.	8.......	Conduit 1928 Loan........	6,000 00	New Sewerage Impt. 4% 1961 Loan...	5,774 46
Dec.	8.......	Internal Impt. 1928 Loan..	13,000 00	New Sewerage Impt. 4% 1961 Loan...	12,511 35
Dec.	8.......	Funding 1936 Loan.......	9,000 00	New Sewerage Impt. 4% 1961 Loan...	8,661 70
Dec.	8.......	Public Impt. 1940 Loan...	10,000 00	New Sewerage Impt. 4% 1961 Loan...	9,624 11
Dec.	8.......	Refunding 1940 Loan......	12,000 00	New Sewerage Impt. 4% 1961 Loan...	11,548 94
Dec.	8.......	Water 1943 Loan.........	3,500 00	New Sewerage Impt. 4% 1961 Loan...	3,368 44
Dec.	8.......	Four Million 1945 Loan...	5,000 00	New Sewerage Impt. 4% 1961 Loan...	4,812 05
Dec.	8.......	Burnt. Dist. Impt. 1954 Loan	11,000 00	New Sewerage Impt. 4% 1961 Loan...	10,586 52
Dec.	8.......	Annex Impt. 1954 Loan...	3,500 00	New Sewerage Impt. 4% 1961 Loan...	3,368 44
Dec.	8.......	Public Pk. Impt. 1955 Loan.	2,000 00	New Sewerage Impt. 4% 1961 Loan...	1,924 83
Dec.	8.......	New Eng. House 1957 Loan	2,000 00	New Sewerage Impt. 4% 1961 Loan...	1,924 83
Dec.	8.......	New Schl. House 1957 Loan	2,000 00	New Sewerage Impt. 4% 1961 Loan...	1,924 83
Dec.	8.......	Conduit 1958 Loan.......	4,000 00	New Sewerage Impt. 4% 1961 Loan...	3,849 65
Dec.	8.......	New Sew. Impt. 1980 Loan	6,000 00	New Sewerage Impt. 4% 1961 Loan...	5,774 46
Dec.	8.......	Annex Impt. 1951 Loan...	1,000 00	New Sewerage Impt. 4% 1961 Loan...	962 41
Dec.	8.......	Paving 1951 Loan.........	2,000 00	New Sewerage Impt. 4% 1961 Loan...	1,924 82
Dec.	8.......	Jones' Falls Impt. 1961 Loan	500 00	New Sewerage Impt. 4% 1961 Loan...	481 20
Dec.	8.......	School House 1961 Loan..	1,000 00	New Sewerage Impt. 4% 1961 Loan...	962 41
Dec.	8.......	Water 1958 Loan.........	3,500 00	New Sewerage Impt. 4% 1961 Loan...	3,368 44
Dec.	8.......	Dock Impt. 1961 Loan....	500 00	New Sewerage Impt. 4% 1961 Loan...	481 20
Dec.	8.......	New Sew. Impt. 1961 Loan	4,500 00	New Sewerage Impt. 4% 1961 Loan...	4,330 85
Dec.	19.......	General Sinking Fund....	5,600 00	New Sewerage Impt. 4% 1961 Loan...	5,396 34
Dec.	19.......	Public Pk. Sink. Fund No. 2	1,300 00	New Sewerage Impt. 4% 1961 Loan...	1,252 72
Dec.	19.......	Burnt. Dist. Impt. 1954 Loan	1,900 00	New Sewerage Impt. 4% 1961 Loan...	1,830 90
		Carried forward.......	$1,558,900 00	*Carried forward*.................	$1,492,944 91

STATEMENT No. 2--*Concluded.*

STOCKS PURCHASED FOR SINKING FUNDS AS REQUIRED BY SECTION 13, ARTICLE 47, CITY CODE, 1893.

DATE.	SINKING FUND.	AMOUNT STOCK PURCHASED.	DESCRIPTION OF STOCK.	AMOUNT PAID.
1913	*Brought forward*......	$1,558,900 00	*Brought forward*..................	$1,492,944 91
Dec. 19.......	Public Impt. 1940 Loan....	1,700 00	New Sewerage Impt. 4% 1961 Loan...	1,638 18
Dec. 19.......	Paving 1951 Loan.........	500 00	New Sewerage Impt. 4% 1961 Loan...	481 82
Dec. 19.......	Internal Impt. 1928 Loan..	3,700 00	New Sewerage Impt. 4% 1961 Loan...	3,565 44
Dec. 19.......	Refunding 1940 Loan......	2,500 00	New Sewerage Impt. 4% 1961 Loan...	2,409 08
Dec. 19.......	Four Million 1945 Loan...	1,300 00	New Sewerage Impt. 4% 1961 Loan...	1,252 72
Dec. 19.......	Conduit 1922 Loan........	1,300 00	New Sewerage Impt. 4% 1961 Loan...	1,252 72
Dec. 19.......	School House 1961 Loan..	500 00	New Sewerage Impt. 4% 1961 Loan...	481 82
Dec. 19.......	Water 1926 Loan.........	1,300 00	New Sewerage Impt. 4% 1961 Loan...	1,252 72
Dec. 19.......	Water 1958 Loan.........	500 00	New Sewerage Impt. 4% 1961 Loan...	481 82
Dec. 19.......	Annex Impt. 1954 Loan...	500 00	New Sewerage Impt. 4% 1961 Loan...	481 82
Dec. 19.......	Water 1916 Loan.........	1,400 00	New Sewerage Impt. 4% 1961 Loan...	1,349 09
Dec. 19.......	Burnt Dist. Impt. 1960 Loan	500 00	New Sewerage Impt. 4% 1961 Loan...	481 82
Dec. 19.......	New Sew. Impt. 1980 Loan	500 00	New Sewerage Impt. 4% 1961 Loan...	481 82
		$1,575,100 00		$1,508,555 78

Dec.	31.......	Enoch Pratt Free L'b'y Fd.	13,900 00	W. M. R. R. 3½% 1927 Loan........	500,000 00
Dec.	31.......	Enoch Pratt Free L'b'y Fd.	38,000 00	Conduit 3½% 1922 Loan.............	
Dec.	31.......	Enoch Pratt Free L'b'y Fd.	25,300 00	Conduit 3½% 1928 Loan..............	
Dec.	31.......	Enoch Pratt Free L'b'y Fd.	5,000 00	Internal Impt. 3½% 1928 Loan........	
Dec.	31.......	Enoch Pratt Free L'b'y Fd.	8,000 00	Funding 3½% 1936 Loan.............	
Dec.	31.......	Enoch Pratt Free L'b'y Fd.	161,700 00	Public Impt. 3½% 1940 Loan........	
Dec.	31.......	Enoch Pratt Free L'b'y Fd.	15,000 00	Refunding 3½% 1940 Loan...........	
Dec.	31.......	Enoch Pratt Free L'b'y Fd.	24,500 00	Water 3½% 1943 Loan...............	
Dec.	31.......	Enoch Pratt Free L'b'y Fd.	56,600 00	Four Million 3½% 1945 Loan.........	
Dec.	31.......	Enoch Pratt Free L'b'y Fd.	10,000 00	W. M. R. R. 3½% 1950 Loan........	
Dec.	31.......	Enoch Pratt Free L'b'y Fd.	83,100 00	Burnt Dist. Impt. 3½% 1954 Loan....	
Dec.	31.......	Enoch Pratt Free L'b'y Fd.	101,100 00	New Sewerage Impt. 3½% 1980 Loan..	
Dec.	31.......	Enoch Pratt Free L'b'y Fd.	4,000 00	W. M. R. R. 4% 1925 Loan...........	
Dec.	31.......	Enoch Pratt Free L'b'y Fd.	21,100 00	Paving 4% 1951 Loan................	
Dec.	31.......	Enoch Pratt Free L'b'y Fd.	8,100 00	New Sewerage Impt. 4% 1961 Loan...	
Dec.	31.......	Enoch Pratt Free L'b'y Fd.	22,600 00	Water 5% 1916 Loan................	
Dec.	31.......	Enoch Pratt Free L'b'y Fd.	3,000 00	Funding 5% 1916 Loan...............	
			$2,176,100 00		$2,008,555 78

RECAPITULATION—STATEMENT No. 1.

SINKING FUND.	AMOUNT STOCK PURCHASED.	DESCRIPTION OF STOCK.	AMOUNT PAID.
General Sinking Fund	$35,000 00	General Fund Bonds ¼ of 1% 1955 Loan	$35,000 00
General Sinking Fund	55,100 00	Consolidated 3½% 1930 Loan	50,976,11
General Sinking Fund	13,500 00	Funding 3½% 1936 Loan	12,633 19
General Sinking Fund	14,500 00	Public Improvement 3½% 1940 Loan	13,471 23
General Sinking Fund	400 00	Paving 4% 1920 Loan	399 96
General Sinking Fund	2,500 00	Harford Run 4% 1920 Loan	2,522 62
General Sinking Fund	70,000 00	Paving 4% 1951 Loan	67,353 22
General Sinking Fund	33,100 00	New Sewerage Improvement 4% 1961 Loan	31,304 64
General Sinking Fund	9,000 00	School House 4% 1961 Loan	8,171 00
General Sinking Fund	14,200 00	Funding 5% 1916 Loan	14,714 58
General Sinking Fund	2,100 00	Water 5% 1916 Loan	2,137 06
Public Park Sinking Fund No. 2	10,000 00	Public Improvement 3½% 1940 Loan	9,357 91
Public Park Sinking Fund No. 2	15,000 00	Paving 4% 1951 Loan	14,432 83
Public Park Sinking Fund No. 2	19,300 00	New Sewerage Improvement 4% 1961 Loan	17,993 85
Public Park Sinking Fund No. 2	2,000 00	School House 4% 1961 Loan	1,815 78
Water 1916 Loan	60,000 00	Paving 4% 1951 Loan	57,731 34
Water 1916 Loan	10,000 00	School House 4% 1961 Loan	9,078 89
Water 1916 Loan	35,200 00	New Sewerage Improvement 4% 1961 Loan	32,578 10
Water 1916 Loan	85,300 00	Water 5% 1916 Loan	88,236 06
Water 1922 Loan	8,000 00	Funding 3½% 1936 Loan	7,469 67
Water 1922 Loan	5,000 00	Internal Improvement 3½% 1928 Loan	4,731 04
Water 1922 Loan	15,000 00	Paving 4% 1951 Loan	14,432 83
Water 1922 Loan	8,100 00	New Sewerage Improvement 4% 1961 Loan	7,499 55
Water 1922 Loan	3,000 00	Funding 5% 1916 Loan	3,068 75
Water 1926 Loan	34,000 00	General Fund Bonds ¼ of 1% 1955 Loan	34,000 00
Water 1926 Loan	2,100 00	Water 4% 1926 Loan	2,083 69
Water 1926 Loan	20,000 00	Paving 4% 1951 Loan	19,243 78
Water 1926 Loan	17,600 00	New Sewerage Improvement 4% 1961 Loan	16,682 85

Water 1943 Loan	12,000 00	Internal Improvement 3½% 1928 Loan	11,438 33
Water 1943 Loan	3,000 00	Public Improvement 3½ 1940 Loan	2,799 88
Water 1943 Loan	1,500 00	W. M. R. R. 4% 1925 Loan	1,520 92
Water 1943 Loan	500 00	Water 4% 1926 Loan	500 31
Water 1943 Loan	11,800 00	New Sewerage Improvement 4% 1961 Loan	10,953 72
Water 1958 Loan	7,600 00	New Sewerage Improvement 4% 1961 Loan	7,140 26
Conduit 1922 Loan	11,000 00	General Fund Bonds ¼ of 1% 1955 Loan	11,000 00
Conduit 1922 Loan	8,100 00	Public Improvement 3½% 1940 Loan	7,579 91
Conduit 1922 Loan	14,000 00	Paving 4% 1951 Loan	13,470 64
Conduit 1922 Loan	21,200 00	New Sewerage Improvement 4% 1961 Loan	19,730 24
Conduit 1922 Loan	3,000 00	School House 4% 1961 Loan	2,723 67
Conduit 1928 Loan	11,000 00	General Fund Bonds ¼ of 1% 1955 Loan	11,000 00
Conduit 1928 Loan	3,000 00	Public Improvement 3½% 1940 Loan	2,799 87
Conduit 1928 Loan	10,000 00	Paving 4% 1951 Loan	9,621 89
Conduit 1928 Loan	24,500 00	New Sewerage Improvement 4% 1961 Loan	22,681 40
Conduit 1928 Loan	2,000 00	School House 4% 1961 Loan	1,815 78
Conduit 1958 Loan	9,700 00	New Sewerage Improvement 4% 1961 Loan	9,058 82
Conduit 1962 Loan	300 00	New Sewerage Improvement 4% 1961 Loan	274 17
Internal Improvement 1928 Loan	80,000 00	General Fund Bonds ¼ of 1% 1955 Loan	80,000 00
Internal Improvement 1928 Loan	40,800 00	Internal Improvement 3½% 1928 Loan	37,821 72
Internal Improvement 1928 Loan	5,000 00	Public Improvement 3½% 1940 Loan	4,520 56
Internal Improvement 1928 Loan	2,500 00	Refunding 3½% 1940 Loan	2,258 72
Internal Improvement 1928 Loan	60,000 00	Paving 4% 1951 Loan	57,731 34
Internal Improvement 1928 Loan	16,700 00	New Sewerage Improvement 4% 1961 Loan	16,076 79
Internal Improvement 1928 Loan	7,000 00	School House 4% 1961 Loan	6,355 22
Internal Improvement 1928 Loan	4,000 00	Water 5% 1916 Loan	4,060 56
Funding 1936 Loan	26,000 00	General Fund Bonds ¼ of 1% 1955 Loan	26,000 00
Funding 1936 Loan	1,800 00	Funding 3½% 1936 Loan	1,671 45
Funding 1936 Loan	12,000 00	Paving 4% 1951 Loan	11,546 27
Funding 1936 Loan	16,100 00	New Sewerage Improvement 4% 1961 Loan	15,150 31
Funding 1936 Loan	4,000 00	School House 4% 1961 Loan	3,631 55
Carried forward	$1,029,100 00	*Carried forward*	$992,054 92

RECAPITULATION—STATEMENT No. 1—*Concluded.*

SINKING FUND.	AMOUNT STOCK PURCHASED.	DESCRIPTION OF STOCK.	AMOUNT PAID.
Brought forward...............	$1,029,100 00	*Brought forward*...............................	$992,054 92
Public Improvement 1940 Loan......	21,000 00	General Fund Bonds ¼ of 1% 1955 Loan.........	21,000 00
Public Improvement 1940 Loan......	90,600 00	Public Improvement 3½% 1940 Loan.............	83,532 52
Public Improvement 1940 Loan......	10,000 00	Paving 4% 1951 Loan..........................	9,621 89
Public Improvement 1940 Loan......	11,700 00	New Sewerage Improvement 4% 1961 Loan........	11,262 29
Public Improvement 1940 Loan......	2,000 00	School House 4% 1961 Loan....................	1,815 78
Refunding 1940 Loan................	45,000 00	General Fund Bonds ¼ of 1% 1955 Loan.........	45,000 00
Refunding 1940 Loan................	33,300 00	Refunding 3½% 1940 Loan......................	30,566 64
Refunding 1940 Loan................	30,000 00	Paving 4% 1951 Loan..........................	28,865 67
Refunding 1940 Loan................	14,500 00	New Sewerage Improvement 4% 1961 Loan........	13,958 02
Refunding 1940 Loan................	5,000 00	School House 4% 1961 Loan....................	4,539 45
Four Million 1945 Loan............	4,000 00	Public Improvement 3½% 1940 Loan.............	3,743 17
Four Million 1945 Loan............	12,000 00	Four Million 3½% 1945 Loan...................	10,802 55
Four Million 1945 Loan............	13,900 00	New Sewerage Improvement 4% 1961 Loan........	13,010 33
Four Million 1945 Loan............	10,000 00	Paving 4% 1951 Loan..........................	9,621 89
Four Million 1945 Loan............	2,000 00	School House 4% 1961 Loan....................	1,815 78
Paving 1951 Loan...................	4,700 00	New Sewerage Improvement 4% 1961 Loan........	4,417 19
Annex Improvement 1951 Loan......	2,100 00	New Sewerage Improvement 4% 1961 Loan........	1,967 69
Annex Improvement 1954 Loan......	7,800 00	New Sewerage Improvement 4% 1961 Loan........	7,323 04
Burnt District Impt. 1954 Loan......	37,000 00	General Fund Bonds ¼ of 1% 1955 Loan.........	37,000 00
Burnt District Impt. 1954 Loan......	3,000 00	Public Improvement 3½% 1940 Loan.............	2,807 38
Burnt District Impt. 1954 Loan......	24,000 00	Paving 4% 1951 Loan..........................	23,092 53
Burnt District Impt. 1954 Loan......	31,200 00	New Sewerage Improvement 4% 1961 Loan........	29,141 58
Burnt District Impt. 1954 Loan......	4,000 00	School House 4% 1961 Loan....................	3,631 55
Burnt District Impt. 1960 Loan......	1,100 00	New Sewerage Improvement 4% 1961 Loan........	1,030 15
Public Park Improvement 1955 Loan.	12,100 00	New Sewerage Improvement 4% 1961 Loan........	11,155 11
New Engine House 1957 Loan......	12,200 00	New Sewerage Improvement 4% 1961 Loan........	11,246 50

New School House 1957 Loan	12,200 00	**New Sewerage Improvement 4% 1961 Loan**	11,246 50
School House 1961 Loan	3,000 00	Public Improvement 3½% 1940 Loan	2,799 88
School House 1961 Loan	10,600 00	New Sewerage Improvement 4% 1961 Loan	9,760 62
Dock Improvement 1961 Loan	1,400 00	New Sewerage Improvement 4% 1961 Loan	1,303 70
Jones' Falls Improvement 1961 Loan	4,000 00	Public Improvement 3½% 1940 Loan	3,743 16
Jones' Falls Improvement 1961 Loan	4,600 00	New Sewerage Improvement 4% 1961 Loan	4,228 14
New Sewerage Impt. 1961 Loan	27,000 00	Public Improvement 3½% 1940 Loan	25,178 40
New Sewerage Impt. 1961 Loan	300 00	Refunding 3½% 1940 Loan	279 91
New Sewerage Impt. 1961 Loan	26,200 00	New Sewerage Improvement 4% 1961 Loan	24,162 24
New Sewerage Impt. 1980 Loan	12,500 00	New Sewerage Improvement 4% 1961 Loan	11,739 61
	$1,575,100 00		$1,508,555 78
Enoch Pratt Free Library Fund	13,900 00	**W. M. R. R. 3¼% 1927 Loan**	500,000 00
Enoch Pratt Free Library Fund	38,000 00	Conduit 3½% 1922 Loan	
Enoch Pratt Free Library Fund	25,300 00	Conduit 3½% 1928 Loan	
Enoch Pratt Free Library Fund	5,000 00	Internal Improvement 3½% 1928 Loan	
Enoch Pratt Free Library Fund	8,000 00	Funding 3½% 1936 Loan	
Enoch Pratt Free Library Fund	161,700 00	Public Improvement 3½% 1940 Loan	
Enoch Pratt Free Library Fund	15,000 00	Refunding 3½% 1940 Loan	
Enoch Pratt Free Library Fund	24,500 00	Water 3½% 1943 Loan	
Enoch Pratt Free Library Fund	56,600 00	Four Million 3½% 1945 Loan	
Enoch Pratt Free Library Fund	10,000 00	W. M. R. R. 3½% 1950 Loan	
Enoch Pratt Free Library Fund	83,100 00	Burnt District 3½% 1954 Loan	
Enoch Pratt Free Library Fund	101,100 00	New Sewerage Improvement 3½% 1980 Loan	
Enoch Pratt Free Library Fund	4,000 00	W. M. R. R. 4% 1925 Loan	
Enoch Pratt Free Library Fund	21,100 00	Paving 4% 1951 Loan	
Enoch Pratt Free Library Fund	8,100 00	New Sewerage Improvement 4% 1961 Loan	
Enoch Pratt Free Library Fund	22,600 00	Water 5% 1916 Loan	
Enoch Pratt Free Library Fund	3,000 00	**Funding 5% 1916 Loan**	
	$2,176,100 00		$2,008,555 78

STATEMENT No. 3.

Condition of the Sinking Funds December 31, 1913.

GENERAL SINKING FUND.

(For redemption of $7,231,179.50 of various loans, viz.: $1,000,000 Funding 5% 1916 Loan; $280,000 McDonogh Extension 5% 1916 Loan; $250,000 Harford Run 4% 1920 Loan; $200,000 Patterson Park Extension 4% 1920 Loan; $500,000 Paving 4% 1920 Loan; $5,000,000 Consolidated 3½% 1930 Loan and $1,179.50 of overdue stock.)

Water 5% 1916 Loan	$35,100 00	
Funding 5% 1916 Loan	47,900 00	
		$83,000 00
Harford Run 4% 1920 Loan	$23,500 00	
Paving 4% 1920 Loan	3,400 00	
Patterson Park Extension 4% 1920 Loan	5,000 00	
W. M. R. R. 4% 1925 Loan	36,800 00	
Water 4% 1926 Loan	500 00	
Paving 4% 1951 Loan	83,200 00	
New Sewerage Improvement 4% 1961 Loan	33,100 00	
School House 4% 1961 Loan	9,000 00	
		194,500 00
Conduit 3½% 1922 Loan	$240,000 00	
Conduit 3½% 1928 Loan	116,100 00	
Consolidated 3½% 1930 Loan	257,659 97	
Funding 3½% 1936 Loan	28,500 00	
Public Improvement 3½% 1940 Loan	680,900 00	
Refunding 3½% 1940 Loan	353,000 00	
Water 3½% 1943 Loan	60,500 00	
Four Million 3½% 1945 Loan	548,200 00	
W. M. R. R. Refunding 3½% 1952 Loan	100,000 00	
Burnt District Improvement 3½% 1954 Loan	487,600 00	
New Sewerage Improvement 3½% 1980 Loan	547,000 00	
		3,419,459 97
W. M. R. R. 3¼% 1927 Loan		477,300 00
General Fund Bonds ¼ of 1% 1955 Loan		105,000 00
Real estate from which an annual income of $4,781.88 is derived, capitalized at 6%		79,698 00
Ground rents on city property from which an annual income of $27,503.20 is derived, and purchased under Ordinance No. 81, 1881, cost		477,139 46
Cash		2,166 33
		$4,838,263 76

W. M. R. R. Sinking Fund.

(For redemption of $4,263,000 W. M. R. R. Loans, viz.: $684,000 due July 1, 1925; $1,704,000 3¼% due January 1, 1927; $875,000 3½% due March 1, 1950, and $1,000,000 3½% due January 1, 1952; all of which loans were issued in aid of the Western Maryland Railroad.)

The interest derived from the investments of this fund is applied to the payment of the annual interest on the above-named outstanding loans.

The four million two hundred and sixty-three thousand dollars of certificates of deposit, named below, are secured by equal amount of Baltimore city stock as collateral.

Water 4% 1926 Loan		$50,000 00
Consolidated 3½% 1930 Loan	$1,700 00	
Refunding 3½% 1940 Loan	7,000 00	
Four Million 3½% 1945 Loan	14,500 00	
		23,200 00
W. M. R. R. 3¼% 1927 Loan		123,000 00
Certificate of deposit, Mercantile Trust and Deposit Company of Baltimore, at 3¼% per annum	$1,979,000 00	
Certificate of deposit, Baltimore Trust Company, at 3¼% per annum	1,184,000 00	
Certificate of deposit, Security Storage and Trust Company of Baltimore, at 3¼% per annum	60,000 00	
Certificate of deposit, American Bonding Company of Baltimore, at 3¼% per annum	200,000 00	
Certificate of deposit, The National Bank of Baltimore, at 3¼% per annum	500,000 00	
Certificate of deposit, National Bank of Commerce of Baltimore, at 3¼% per annum	340,000 00	
		4,263,000 00
Cash		4,822 18
		$4,464,022 18

PUBLIC PARK SINKING FUND NO. 2.

(For redemption of $1,000,000 of the Four Million 3½% 1945 Loan, maturing March 1, 1945, issued for the purchase of land and improving same for public park purposes. The redemption of the remaining $3,000,000 is provided for by the Four Million 1945 Loan Sinking Fund.)

Water 5% 1916 Loan		$3,700 00
W. M. R. R. 4% 1925 Loan	$3,000 00	
Paving 4% 1951 Loan	24,400 00	
New Sewerage Improvement 4% 1961 Loan	19,300 00	
School House 4% 1961 Loan	2,000 00	
		48,700 00
Conduit 3½% 1922 Loan	$23,000 00	
Conduit 3½% 1928 Loan	19,100 00	
Consolidated 3½% 1930 Loan	3,000 00	
Funding 3½% 1936 Loan	15,000 00	
Public Improvement 3½% 1940 Loan	34,200 00	
Refunding 3½% 1940 Loan	9,500 00	
Water 3½% 1943 Loan	22,900 00	
Four Million 3½% 1945 Loan	60,400 00	
W. M. R. R. 3½% 1950 Loan	10,000 00	
Burnt District Improvement 3½% 1954 Loan	67,800 00	
New Sewerage Improvement 3½% 1980 Loan	119,000 00	
		383,900 00
W. M. R. R. 3¼% 1927 Loan		15,300 00
Cash		256 40
		$451,856 40

WATER 1916 LOAN SINKING FUND.

(For redemption of $5,000,000 5% stock, maturing July 1, 1916, issued for the purpose of improving and extending the water supply.)

Water 5% 1916 Loan	$908,000 00	
Funding 5% 1916 Loan	33,600 00	
		$941,600 00
W. M. R. R. 4% 1925 Loan	$900 00	
Paving 4% 1951 Loan	90,400 00	
Amounts carried forward	$91,300 00	$941,600 00

Amounts brought forward	$91,300 00	$941,600 00
New Sewerage Improvement 4% 1961 Loan	35,200 00	
School House 4% 1961 Loan	10,000 00	
		136,500 00
Conduit 3½% 1922 Loan	$83,000 00	
Conduit 3½% 1928 Loan	121,900 00	
Consolidated 3½% 1930 Loan	50,000 00	
Public Improvement 3½% 1940 Loan	104,200 00	
Refunding 3½% 1940 Loan	117,000 00	
Water 3½% 1943 Loan	121,400 00	
Four Million 3½% 1945 Loan	466,000 00	
W. M. R. R. 3½% 1952 Loan	100,000 00	
Burnt District Improvement 3½% 1954 Loan	318,600 00	
New Sewerage Improvement 3½% 1980 Loan	503,700 00	
		1,985,800 00
W. M. R. R. 3¼% 1927 Loan		60,900 00
Cash		4,181 89
		$3,128,981 89

WATER 1922 LOAN SINKING FUND.

(For redemption of $500,000 4% stock, maturing November 1, 1922, issued for the purpose of improving and extending the water supply.)

Water 5% 1916 Loan	$22,600 00	
Funding 5% 1916 Loan	3,000 00	
		$25,600 00
W. M. R. R. 4% 1925 Loan	$4,000 00	
Paving 4% 1951 Loan	21,100 00	
New Sewerage Improvement 4% 1961 Loan	8,100 00	
		33,200 00
Conduit 3½% 1922 Loan	$38,000 00	
Internal Improvement 3½% 1928 Loan	5,000 00	
Conduit 3½% 1928 Loan	25,300 00	
Funding 3½% 1936 Loan	8,000 00	
Public Improvement 3½% 1940 Loan	161,700 00	
Refunding 3½% 1940 Loan	15,000 00	
Water 3½% 1943 Loan	24,500 00	
Four Million 3½% 1945 Loan	56,600 00	
Amounts carried forward	$334,100 00	$58,800 00

Amounts brought forward	$334,100 00	$58,800 00
W. M. R. R. 3½% 1950 Loan	10,000 00	
Burnt District Improvement 3½% 1954 Loan	83,100 00	
New Sewerage Improvement 3½% 1980 Loan	101,100 00	
		528,300 00
W. M. R. R. 3¼% 1927 Loan		13,900 00
Cash		1,284 85
		$602,284 85

The above statement is submitted to show the condition of the Fund December 31, 1913, at which time the entire contents of the Fund were sold to and are now included in Enoch Pratt Free Library Fund.

WATER 1926 LOAN SINKING FUND.

(For redemption of $1,000,000 4% stock, maturing November 1, 1926, issued for the purpose of improving and extending the water supply.)

Water 5% 1916 Loan	$109,000 00	
Funding 5% 1916 Loan	3,100 00	
		$112,100 00
Harford Run 4% 1920 Loan	$3,800 00	
W. M. R. R. 4% 1925 Loan	10,800 00	
Water 4% 1926 Loan	23,100 00	
Paving 4% 1951 Loan	32,100 00	
New Sewerage Improvement 4% 1961 Loan	17,600 00	
		87,400 00
Conduit 3½% 1922 Loan	$88,000 00	
Conduit 3½% 1928 Loan	76,800 00	
Internal Improvement 3½% 1928 Loan	10,000 00	
Consolidated 3½% 1930 Loan	31,600 00	
Public Improvement 3½% 1940 Loan	160,600 00	
Refunding 3½% 1940 Loan	30,000 00	
Water 3½% 1943 Loan	32,000 00	
Four Million 3½% 1945 Loan	97,700 00	
Burnt District Improvement 3½% 1954 Loan	144,200 00	
New Sewerage Improvement 3½% 1980 Loan	133,200 00	
		804,100 00
W. M. R. R. 3¼% 1927 Loan		39,300 00
General Fund Bonds ¼ of 1% 1955 Loan		102,000 00
Cash		1,371 31
		$1,146,271 31

WATER 1943 LOAN SINKING FUND.

(For redemption of $1,000,000 3½% stock, maturing January 1, 1943, issued for the purpose of improving and extending the water supply.)

Water 5% 1916 Loan	$9,400 00	
Funding 5% 1916 Loan	4,700 00	
		$14,100 00
Water 4% 1926 Loan	$500 00	
W. M. R. R. 4% 1925 Loan	1,500 00	
Paving 4% 1951 Loan	2,400 00	
New Sewerage Improvement 4% 1961 Loan	11,800 00	
		16,200 00
Conduit 3½% 1928 Loan	$5,600 00	
Water 3½% 1943 Loan	27,400 00	
Four Million 3½% 1945 Loan	15,000 00	
Burnt District Improvement 3½% 1954 Loan	39,800 00	
New Sewerage Improvement 3½% 1980 Loan	61,900 00	
Internal Improvement 3½% 1928 Loan	12,000 00	
Public Improvement 3½% 1940 Loan	3,000 00	
		164,700 00
Cash		931 54
		$195,931 54

WATER 1958 LOAN SINKING FUND.

(For redemption of $5,000,000 4% stock, maturing December 1, 1958, to be issued for improving and extending the water supply.)

Paving 4% 1951 Loan	$40,700 00	
New Sewerage Improvement 4% 1961 Loan	7,600 00	
		$48,300 00
New Sewerage Improvement 3½% 1980 Loan		158,800 00
Cash		244 24
		$207,344 24

CONDUIT 1922 LOAN SINKING FUND.

(For redemption of $1,000,000 3½% stock, maturing January 1, 1922, issued for the purpose of constructing underground conduits for electrical wires.)

W. M. R. R. 4% 1925 Loan	$26,000 00	
Paving 4% 1951 Loan	20,600 00	
School House 4% 1961 Loan	3,000 00	
New Sewerage Improvement 4% 1961 Loan	21,200 00	
		$70,800 00
Conduit 3½% 1922 Loan	$146,000 00	
Conduit 3½% 1928 Loan	43,800 00	
Internal Improvement 3½% 1928 Loan	20,000 00	
Consolidated 3½% 1930 Loan	3,300 00	
Funding 3½% 1936 Loan	20,000 00	
Public Improvement 3½% 1940 Loan	8,100 00	
Refunding 3½% 1940 Loan	5,000 00	
Water 3½% 1943 Loan	29,900 00	
Four Million 3½% 1945 Loan	19,000 00	
Burnt District Improvement 3½% 1954 Loan	115,100 00	
New Sewerage Improvement 3½% 1980 Loan	112,000 00	
		522,200 00
General Fund Bonds ¼ of 1% 1955 Loan		33,000 00
Cash		1,322 59
		$627,322 59

CONDUIT 1928 LOAN SINKING FUND.

(For redemption of $1,000,000 3½% stock, maturing January 1, 1928, issued for the purpose of constructing underground conduits for electrical wires.)

W. M. R. R. 4% 1925 Loan	$28,000 00	
Paving 4% 1951 Loan	15,400 00	
New Sewerage Improvement 4% 1961 Loan	24,500 00	
School House 4% 1961 Loan	2,000 00	
		$69,900 00
Conduit 3½% 1928 Loan	$125,900 00	
Internal Improvement 3½% 1928 Loan	10,300 00	
Public Improvement 3½% 1940 Loan	3,000 00	
Amounts carried forward	$139,200 00	$69,900 00

Amounts brought forward	$139,200 00	$69,900 00
Water 3½% 1943 Loan	23,000 00	
Burnt District Improvement 3½% 1954 Loan	74,300 00	
New Sewerage Improvement 3½% 1980 Loan	108,000 00	
		344,500 00
General Fund Bonds ¼ of 1% 1955 Loan		33,000 00
Cash		1,910 69
		$449,310 69

Conduit 1958 Loan Sinking Fund.

(For redemption of $1,000,000 4% stock, maturing December 1, 1958, issued for the purpose of constructing underground conduits for electrical wires.)

Paving 4% 1951 Loan	$700 00	
New Sewerage Improvement 4% 1961 Loan	9,700 00	
		$10,400 00
Water 3½% 1943 Loan	$10,100 00	
Burnt District Improvement 3½% 1954 Loan	7,600 00	
New Sewerage Improvement 3½% 1980 Loan	32,300 00	
		50,000 00
Cash		529 18
		$60,929 18

Conduit 1962 Loan Sinking Fund.

(For redemption of $2,000,000 4% stock, maturing August 1, 1962, authorized for the purpose of constructing underground conduits for electrical wires.)

Paving 4% 1951 Loan	$15,200 00	
New Sewerage Improvement 4% 1961 Loan	300 00	
		$15,500 00
Cash		339 83
		$15,839 83

Internal Improvement 1928 Loan Sinking Fund.

(For the redemption of $4,850,000 3½% stock, maturing July 1, 1928, issued for the purpose of rebuilding old sewers and establishing a new sewerage system; extension of existing and establishing new public parks; opening, widening, paving and repaving streets; new school buildings and additions to old ones, and for new bridges and rebuilding old ones.)

Water 5% 1916 Loan	$132,000 00	
Funding 5% 1916 Loan	8,900 00	
		$140,900 00
Harford Run 4% 1920 Loan	$7,700 00	
W. M. R. R. 4% 1925 Loan	16,300 00	
Paving 4% 1951 Loan	78,100 00	
New Sewerage Improvement 4% 1961 Loan	16,700 00	
School House 4% 1961 Loan	7,000 00	
		125,800 00
Conduit 3½% 1922 Loan	$50,000 00	
Conduit 3½% 1928 Loan	129,400 00	
Internal Improvement 3½% 1928 Loan	454,600 00	
Consolidated 3½% 1930 Loan	49,800 00	
Funding 3½% 1936 Loan	5,000 00	
Public Improvement 3½% 1940 Loan	485,600 00	
Refunding 3½% 1940 Loan	82,500 00	
Water 3½% 1943 Loan	112,900 00	
Four Million 3½% 1945 Loan	347,500 00	
Burnt District Improvement 3½% 1954 Loan	394,300 00	
New Sewerage Improvement 3½% 1980 Loan	445,000 00	
		2,556,600 00
W. M. R. R. 3¼% 1927 Loan		212,000 00
General Fund Bonds ¼ of 1% 1955 Loan		240,000 00
Cash		2,924 66
		$3,278,224 66

FUNDING 1936 LOAN SINKING FUND.

(For redemption of $1,453,300 3½% stock, maturing July 1, 1936.)

Harford Run 4% 1920 Loan	$500 00	
W. M. R. R. 4% 1925 Loan	4,000 00	
Paving 4% 1951 Loan	20,000 00	
New Sewerage Improvement 4% 1961 Loan	16,100 00	
School House 4% 1961 Loan	4,000 00	
		$44,600 00
Conduit 3½% 1922 Loan	$20,000 00	
Conduit 3½% 1928 Loan	41,100 00	
Consolidated 3½% 1930 Loan	400 00	
Funding 3½% 1936 Loan	52,800 00	
Public Improvement 3½% 1940 Loan	58,300 00	
Refunding 3½% 1940 Loan	20,000 00	
Water 3½% 1943 Loan	34,800 00	
Four Million 3½% 1945 Loan	164,400 00	
W. M. R. R. 3½% 1950 Loan	20,000 00	
Burnt District Improvement 3½% 1954 Loan	105,500 00	
New Sewerage Improvement 3½% 1980 Loan	131,900 00	
		649,200 00
W. M. R. R. 3¼% 1927 Loan		18,000 00
General Fund Bonds ¼ of 1% 1955 Loan		78,000 00
Cash		2,136 71
		$791,936 71

PUBLIC IMPROVEMENT 1940 LOAN SINKING FUND.

(For redemption of $6,000,000 3½% stock, maturing January 1, 1940, issued for the purpose of rebuilding old sewers and establishing a new sewerage system; opening, widening and paving streets; construction of underground conduits for electric wires; construction of new school buildings and additions to old ones; constructing new bridges and reconstructing old ones; construction of a new Court House, and for a topographical survey of the city.)

Water 5% 1916 Loan		$10,000 00
Harford Run 4% 1920 Loan	$3,600 00	
Water 4% 1926 Loan	1,500 00	
W. M. R. R. 4% 1925 Loan	600 00	
Paving 4% 1951 Loan	13,700 00	
Amounts carried forward	$19,400 00	$10,000 00

Amounts brought forward	$19,400 00	$10,000 00
New Sewerage Improvement 4% 1961 Loan	11,700 00	
School House 4% 1961 Loan	2,000 00	
		33,100 00
Conduit 3½% 1922 Loan	$25,000 00	
Conduit 3½% 1928 Loan	40,600 00	
Consolidated 3½% 1930 Loan	40,800 00	
Funding 3½% 1936 Loan	20,000 00	
Public Improvement 3½% 1940 Loan	636,000 00	
Refunding 3½% 1940 Loan	50,000 00	
Water 3½% 1943 Loan	66,600 00	
Four Million 3½% 1945 Loan	162,500 00	
W. M. R. R. 3½% 1952 Loan	3,000 00	
Burnt District Improvement 3½% 1954 Loan	261,600 00	
New Sewerage Improvement 3½% 1980 Loan	296,000 00	
		1,602,100 00
W. M. R. R. 3¼% 1927 Loan		66,000 00
General Fund Bonds ¼ of 1% 1955 Loan		63,000 00
Cash		2,220 03
		$1,776,420 03

REFUNDING 1940 LOAN SINKING FUND

(For redemption of $4,300,000 3½% stock, maturing January 1, 1940, issued for the purpose of funding a floating debt existing in 1870; improving Jones' Falls and building a new City Hall.)

Paving 4% 1951 Loan	$32,400 00	
New Sewerage Improvement 4% 1961 Loan	14,500 00	
School House 4% 1961 Loan	5,000 00	
		$51,900 00
Conduit 3½% 1922 Loan	$52,000 00	
Conduit 3½% 1928 Loan	73,500 00	
Consolidated 3½% 1930 Loan	3,000 00	
Funding 3½% 1936 Loan	10,000 00	
Public Improvement 3½% 1940 Loan	74,000 00	
Refunding 3½% 1940 Loan	622,400 00	
Water 3½% 1943 Loan	61,600 00	
Four Million 3½% 1945 Loan	88,600 00	
Amounts carried forward	$985,100 00	$51,900 00

Amounts brought forward	$985,100 00	$51,900 00
Burnt District Improvement 3½% 1954 Loan.	240,500 00	
New Sewerage Improvement 3½% 1980 Loan.	275,700 00	
		1,501,300 00
W. M. R. R. 3¼% 1927 Loan		31,300 00
General Fund Bonds ¼ of 1% 1955 Loan		135,000 00
Cash		2,211 02
		$1,721,711 02

FOUR MILLION 1945 LOAN SINKING FUND.

(For redemption of $3,000,000 of the Four Million 3½% 1945 Loan, maturing March 1, 1945; $2,000,000 was issued for the purpose of improving and extending the water supply and $1,000,000 for the completion of the new Court House. The redemption of the remaining $1,000,000 is provided for by Public Park Sinking Fund No. 2.)

W. M. R. R. 4% 1925 Loan	$3,000 00	
Paving 4% 1951 Loan	16,800 00	
New Sewerage Improvement 4% 1961 Loan	13,900 00	
School House 4% 1961 Loan	2,000 00	
		$35,700 00
Conduit 3½% 1928 Loan	$39,700 00	
Funding 3½% 1936 Loan	10,000 00	
Public Improvement 3½% 1940 Loan	124,200 00	
Refunding 3½% 1940 Loan	12,000 00	
Water 3½% 1943 Loan	17,400 00	
Four Million 3½% 1945 Loan	194,000 00	
W. M. R. R. 3½% 1950 Loan	10,000 00	
Burnt District Improvement 3½% 1954 Loan.	80,500 00	
New Sewerage Improvement 3½% 1980 Loan.	112,400 00	
		600,200 00
W. M. R. R. 3¼% 1927 Loan		10,000 00
Cash		830 45
		$646,730 45

ANNEX IMPROVEMENT 1951 LOAN SINKING FUND.

(For redemption of $2,500,000 4% stock, maturing August 1, 1951, authorized for the purpose of condemning, opening, widening and paving avenues, streets, alleys, etc., in the Annex portion of the city.)

Paving 4% 1951 Loan	$30,000 00	
New Sewerage Improvement 4% 1961 Loan	2,100 00	
		$32,100 00
New Sewerage Improvement 3½% 1980 Loan		29,500 00
Cash		328 06
		$61,928 06

ANNEX IMPROVEMENT 1954 LOAN SINKING FUND.

(For redemption of $2.000,000 4% stock, maturing June 1, 1954, issued for the purpose of condemning, opening, widening and paving streets, avenues, alleys, etc., in the Annex portion of the city.)

Paving 4% 1951 Loan	$20,200 00	
New Sewerage Improvement 4% 1961 Loan	7,800 00	
		$28,000 00
Conduit 3½% 1928 Loan	$2,200 00	
Water 3½% 1943 Loan	30,600 00	
Burnt District Improvement 3½% 1954 Loan	87,900 00	
New Sewerage Improvement 3½% 1980 Loan	68,900 00	
		189.600 00
Cash		281 86
		$217,881 86

PAVING 1951 LOAN SINKING FUND.

(For redemption of $5,000,000 4% stock, maturing August 1, 1951, issued for the purpose of providing new and improved paving for streets, etc.)

Paving 4% 1951 Loan	$60,100 00	
New Sewerage Improvement 4% 1961 Loan	4,700 00	
		$64,800 00
New Sewerage Improvement 3½% 1980 Loan		61,200 00
Cash		190 27
		$126,190 27

BURNT DISTRICT IMPROVEMENT 1954 LOAN SINKING FUND.

(For redemption of $6,000,000 3½% stock, maturing June 1, 1954, issued for the purpose of opening, widening, straightening and paving streets, etc., and establishing public wharves and docks as planned by the Burnt District Commission.)

Water 5% 1916 Loan		$10,000 00
Paving 4% 1951 Loan	$31,700 00	
New Sewerage Improvement 4% 1961 Loan	31,200 00	
School House 4% 1961 Loan	4,000 00	
		66,900 00
Conduit 3½% 1928 Loan	$29,300 00	
Consolidated 3½% 1930 Loan	9,700 00	
Public Improvement 3½% 1940 Loan	3,000 00	
Water 3½% 1943 Loan	170,700 00	
Burnt District Improvement 3½% 1954 Loan	274,800 00	
New Sewerage Improvement 3½% 1980 Loan	185,000 00	
		672,500 00
W. M. R. R. 3¼% 1927 Loan		37,900 00
General Fund Bonds ¼ of 1% 1955 Loan		111,000 00
Cash		2,197 20
		$900,497 20

BURNT DISTRICT IMPROVEMENT 1960 LOAN SINKING FUND.

(For redemption of $685,000 4% stock, maturing April 1, 1960, issued for the purpose of completing the city docks and piers as planned by the Burnt District Commission.)

Paving 4% 1951 Loan	$8,000 00	
New Sewerage Improvement 4% 1961 Loan	1,100 00	
		$9,100 00
New Sewerage Improvement 3½% 1980 Loan		23,900 00
Cash		202 35
		$33,202 35

PUBLIC PARK IMPROVEMENT 1955 LOAN SINKING FUND.

(For redemption of $1,000,000 4% stock, maturing May 1, 1955, issued for the purchase of land and the improvement of same for public park purposes.)

Paving 4% 1951 Loan	$1,100 00	
New Sewerage Improvement 4% 1961 Loan	12,100 00	
		$13,200 00
Conduit 3½% 1928 Loan	$900 00	
Water 3½% 1943 Loan	1,300 00	
Burnt District Improvement 3½% 1954 Loan.	35,900 00	
New Sewerage Improvement 3½% 1980 Loan.	31,600 00	
		69,700 00
Cash		413 39
		$83,313 39

NEW ENGINE HOUSE 1957 LOAN SINKING FUND.

(For the redemption of $1,000,000 4% stock, maturing June 1, 1957, issued for the purpose of acquiring land for new fire engine houses and reconstructing old ones.)

Paving 4% 1951 Loan	$900 00	
New Sewerage Improvement 4% 1961 Loan	12,200 00	
		$13,100 00
Conduit 3½% 1928 Loan	$700 00	
Water 3½% 1943 Loan	25,800 00	
Burnt District Improvement 3½% 1954 Loan.	17,600 00	
New Sewerage Improvement 3½% 1980 Loan.	32,600 00	
		76,700 00
Cash		546 50
		$90,346 50

NEW SCHOOL HOUSE 1957 LOAN SINKING FUND.

(For the redemption of $1,000,000 4% stock, maturing June 1, 1957, issued for the purpose of acquiring land for new school houses and reconstructing old ones.)

Paving 4% 1951 Loan	$900 00	
New Sewerage Improvement 4% 1961 Loan	12,200 00	
		$13,100 00
Conduit 3½% 1928 Loan	$700 00	
Water 3½% 1943 Loan	25,800 00	
Burnt District Improvement 3½% 1954 Loan	17,600 00	
New Sewerage Improvement 3½% 1980 Loan	32,600 00	
		76,700 00
Cash		546 50
		$90,346 50

SCHOOL HOUSE 1961 LOAN SINKING FUND.

(For redemption of $1,500,000 4% stock, maturing March 1, 1961, issued for the purpose of acquiring land for and the construction of public school buildings.)

Paving 4% 1951 Loan	$500 00	
New Sewerage Improvement 4% 1961 Loan	10,600 00	
		$11,100 00
Public Improvement 3½% 1940 Loan	$3,000 00	
New Sewerage Improvement 3½% 1980 Loan	29,100 00	
		32,100 00
Cash		182 50
		$43,382 50

DOCK IMPROVEMENT 1961 LOAN SINKING FUND.

(For redemption of $2,000,000 4% stock, maturing March 1, 1961, issued for the purpose of constructing and establishing city docks and piers along the Patapsco River and its tributaries.)

Paving 4% 1951 Loan	$15,700 00	
New Sewerage Improvement 4% 1961 Loan	1,400 00	
		$17,100 00
New Sewerage Improvement 3½% 1980 Loan		33,200 00
Cash		599 55
		$50,899 55

JONES' FALLS IMPROVEMENT 1961 LOAN SINKING FUND.

(For redemption of $1,000,000 4% stock, maturing March 1, 1961, issued for the purpose of opening, constructing and establishing a public highway over and along Jones' Falls in the City of Baltimore.)

Paving 4% 1951 Loan	$300 00	
New Sewerage Improvement 4% 1961 Loan	4,600 00	
		$4,900 00
New Sewerage Improvement 3½% 1980 Loan	$16,400 00	
Public Improvement 3½% 1940 Loan	4,000 00	
		20,400 00
Cash		404 20
		$25,704 20

NEW SEWERAGE IMPROVEMENT 1961 LOAN SINKING FUND.

(For the redemption of $10,000,000 4% stock, maturing August 1. 1961, issued for the purpose of completing the new sewerage system.)

Paving 4% 1951 Loan	$31,400 00	
New Sewerage Improvement 4% 1961 Loan	26,200 00	
W. M. R. R. 4% 1925 Loan	49,000 00	
		$106,600 00
Public Improvement 3½% 1940 Loan	$41,000 00	
Refunding 3½% 1940 Loan	14,300 00	
		55,300 00
Cash		564 69
		$162,464 69

NEW SEWERAGE IMPROVEMENT 1980 LOAN SINKING FUND

(For redemption of $10,000,000 3½% stock, maturing October 1, 1980, issued for the purpose of projecting, constructing and establishing a new sewerage system.)

Paving 4% 1951 Loan	$42,000 00	
New Sewerage Improvement 4% 1961 Loan	12,500 00	
		$54,500 00
Conduit 3½% 1928 Loan	$3,500 00	
Water 3½% 1943 Loan	7,600 00	
Amounts carried forward	$11,100 00	$54,500 00

Amounts brought forward	$11,100 00	$54,500 00
Burnt District Improvement 3½% 1954 Loan.	149,100 00	
New Sewerage Improvement 3½% 1980 Loan.	134,200 00	
		294,400 00
Cash		396 62
		$349,296 62

FUND FOR REDEMPTION FIVE MILLION 1890 LOAN.

(For redemption of outstanding Five Million Loan to Baltimore and Ohio Railroad Company, due January 1, 1890; no interest allowed.)

Cash	$200 00

RECAPITULATION.

FACE VALUE OF THE SINKING FUNDS.

General Sinking Fund	$4,838,263 76
Public Park Sinking Fund No. 2	451,856 40
W. M. R. R. Sinking Fund	4,464,022 18
Water 1916 Loan Sinking Fund	3,128,981 89
Water 1926 Loan Sinking Fund	1,146,271 31
Water 1943 Loan Sinking Fund	195,931 54
Water 1958 Loan Sinking Fund	207,344 24
Conduit 1922 Loan Sinking Fund	627,322 59
Conduit 1928 Loan Sinking Fund	449,310 69
Conduit 1958 Loan Sinking Fund	60,929 18
Conduit 1962 Loan Sinking Fund	15,839 83
Internal Improvement 1928 Loan Sinking Fund	3,278,224 66
Funding 1936 Loan Sinking Fund	791,936 71
Public Improvement 1940 Loan Sinking Fund	1,776,420 03
Refunding 1940 Loan Sinking Fund	1,721,711 02
Four Million 1945 Loan Sinking Fund	646,730 45
Annex Improvement 1951 Loan Sinking Fund	61,928 06
Annex Improvement 1954 Loan Sinking Fund	217,881 86
Paving 1951 Loan Sinking Fund	126,190 27
Burnt District Improvement 1954 Loan Sinking Fund	900,497 20
Burnt District Improvement 1960 Loan Sinking Fund	33,202 35
Public Park Improvement 1955 Loan Sinking Fund	83,313 39
New Engine House 1957 Loan Sinking Fund	90,346 50
Amount carried forward	$25,314,456 11

Amount brought forward	$25,314,456 11
New School House 1957 Loan Sinking Fund	90,346 50
School House 1961 Loan Sinking Fund	43,382 50
Dock Improvement 1961 Loan Sinking Fund	50,899 55
Jones' Falls Improvement 1961 Loan Sinking Fund	25,704 20
New Sewerage Improvement 1961 Loan Sinking Fund	162,464 69
New Sewerage Improvement 1980 Loan Sinking Fund	349,296 62
Fund for redemption of Five Million 1890 Loan	200 00
	$26,036,750 17

SUMMARY OF THE SINKING FUNDS.

Baltimore city stock (face value)	$21,181,459 97
Certificates of deposit in Baltimore city trust companies and national banks	4,263,000 00
Ground rents (cost)	477,139 46
Real estate (capitalized at 6%)	79,698 00
Cash deposited in banks	35,452 74
	$26,036,750 17

STATEMENT No. 4.

ENOCH PRATT FREE LIBRARY FUND.

(Held in trust by the Commissioners of Finance under Ordinance No. 106, 1882, for the purpose of creating, in part, an annuity to be paid forever, in equal quarterly installments, for the purposes and maintenance of Enoch Pratt Free Library of Baltimore City.)

Water 5% 1916 Loan	$76,900 00	
Funding 5% 1916 Loan	5,500 00	
		$82,400 00
Paving 4% 1920 Loan	$62,300 00	
Patterson Park Extension 4% 1920 Loan	195,000 00	
Harford Run 4% 1920 Loan	900 00	
W. M. R. R. 4% 1925 Loan	6,100 00	
Water 4% 1926 Loan	1,000 00	
Paving 4% 1951 Loan	21,100 00	
New Sewerage Improvement 4% 1961 Loan	8,100 00	
		294,500 00
Conduit 3½% 1922 Loan	$38,000 00	
Conduit 3½% 1928 Loan	25,300 00	
Amounts carried forward	$63,300 00	$376,900 00

Amounts brought forward	$63,300 00	$376,900 00
Internal Improvement 3½% 1928 Loan	18,200 00	
Consolidated 3½% 1930 Loan	113,200 00	
Funding 3½% 1936 Loan	8,000 00	
Public Improvement 3½% 1940 Loan	204,400 00	
Refunding 3½% 1940 Loan	160,100 00	
Water 3½% 1943 Loan	24,500 00	
Four Million 3½% 1945 Loan	94,400 00	
W. M. R. R. 3½% 1950 Loan	10,000 00	
Burnt District Improvement 3½% 1954 Loan	83,100 00	
New Sewerage Improvement 3½% 1980 Loan	101,100 00	
		880,300 00
W. M. R. R. 3¼% 1927 Loan		17,900 00
Cash		1,284 85
		$1,276,384 85

STATEMENT No. 5.

Horwitz Benevolent Fund.

(Held in trust by the Commissioners of Finance under Resolution No. 7, 1881, the income from which shall be distributed annually by the Mayor in aid of the support of twelve poor families of the City of Baltimore in such proportions as he may deem just.)

Water 5% 1916 Loan	$400 00	
Funding 5% 1916 Loan	2,600 00	
		$3,000 00
W. M. R. R. 4% 1925 Loan		300 00
Conduit 3½% 1928 Loan	$400 00	
Internal Improvement 3½% 1928 Loan	100 00	
Consolidated 3½% 1930 Loan	1,300 00	
Public Improvement 3½% 1940 Loan	3,000 00	
Refunding 3½% 1940 Loan	6,400 00	
Water 3½% 1943 Loan	700 00	
Four Million 3½% 1945 Loan	1,600 00	
Burnt District Improvement 3½% 1954 Loan	1,100 00	
New Sewerage Improvement 3½% 1980 Loan	600 00	
		15,200 00
W. M. R. R. 3¼% 1927 Loan		1,500 00
Cash		504 15
		$20,504 15

STATEMENT No. 6.

FREDERICK RAINE FUND.

(Held in trust by the Commissioners of Finance under Resolution No. 51, 1897, the income to be used for the purchase of two medals annually—one to be awarded by the Board of School Commissioners to the pupil of the Baltimore City College who shall be adjudged most proficient in the study of the German language and German literature, and the other to be awarded by the Maryland Institute to the pupil who shall be adjudged most proficient in mechanical drawing.)

Public Improvement $3\frac{1}{2}\%$ 1940 Loan	$400 00

STATEMENT No. 7.

A SCHEDULE OF REAL ESTATE AND GROUND RENTS UPON THE BOOKS OF THE COMMISSIONERS OF FINANCE.

Lessees.	*Location of Lots.*	*Annual Rental.*
Platt & Co.	Old Fish House property	$1,457 00
Safe Deposit and Trust Co. of Baltimore, trustee for Robert E. Davis	Fayette and Arch streets	48 00
Boys' Home Society	Pleasant and Calvert streets	50 00
W. S. Cahill Co.	Old City Yard property	497 25
Maryland Dredging and Contracting Co.	Old City Yard property	1,800 00
Kate Geraghty	127 Battery avenue	157 50
Dr. John G. Huck	Charles and Weyler streets	75 70
Sophia M. Kelly	Nos. 5, 7 and 9 Weyler street	150 00
Aaron Hess	No. 11 Weyler street	33 60
John Mack	No. 13 Weyler street	19 20
William J. Blair	Nos. 15 and 17 Weyler street	52 64
Ida Young	Nos. 19 and 21 Weyler street	52 64
Esther Gallia	No. 23 Weyler street	26 32
H. Klasmeier	No. 25 Weyler street	25 48
Conrad Kern	No. 27 Weyler street	26 32
Annie A. Derwart, trustee	No. 29 Weyler street	26 32
Mary A. Steen	Nos. 31 and 33 Weyler street	52 64
Bernard Sherry	No. 35 Weyler street	19 20
George Wimmer	No. 37 Weyler street	20 32
Abraham Strauss	Nos. 39 and 41 Weyler street	54 49
Margaret Goetze	No. 43 Weyler street	29 60
Caroline O. Eppley	No. 45 Weyler street	29 60
Augusta C. Pfeil	Light and Weyler street	78 06
(Capitalized at 6 per cent., $79,698.)		$4,781 88

PURCHASED BY AUTHORITY OF ORDINANCE NO. 81, OF 1881.

Lessees.	*Location of Lots.*	*Annual Rental.*	
Amount brought forward			$4,781 88
Boys' Latin School	Park av. nr. Preston st.	$549 00	
Mayor and City Council	Hollins & Monroe sts.	750 00	
Mayor and City Council	Pa. av. and Robert st.	320 00	
Mayor and City Council	Fred'k & Fairview avs.	360 00	
Mayor and City Council	Waesche st., near Fremont st.	480 00	
Mayor and City Council	e. s. Caroline st., bet. Lombard and Pratt.	107 33	
Mayor and City Council	Castle street	209 25	
Mayor and City Council	Hanover and Lee sts.	210 00	
Mayor and City Council	Sharp and West sts.	570 00	
Mayor and City Council	Argyle ave., near Lanvale st.	120 00	
Mayor and City Council	Hull and Clement sts.	350 00	
Mayor and City Council	Linden av. & Wilson st.	840 00	
Mayor and City Council	Charles & Ostend sts.	372 50	
Mayor and City Council	Ann and Chase sts.	501 75	
Mayor and City Council	Howard st., opp. Centre st.	1,000 00	
Mayor and City Council	Eden st., nr. Hoffman	80 00	
Mayor and City Council	Broadway and Bank st.	200 00	
Mayor and City Council	Mosher and Gilmor sts.	757 00	
Mayor and City Council	Northeast Market	1,200 00	
Mayor and City Council	Collington Square	960 00	
Mayor and City Council	Perkins Spring Square	2,052 00	
Mayor and City Council	Riverside Park	3,770 62	
Mayor and City Council	Holliday & Fayette sts.	56 00	
Mayor and City Council	Lexington & Paca sts.	228 00	
Mayor and City Council	Bond and Chew sts.	130 00	
Mayor and City Council	Carey st. and Columbia avenue	385 00	
Mayor and City Council	Chappell st., nr. Carey.	630 00	
Mayor and City Council	Cross Street Market	974 00	
Mayor and City Council	Linden av. & Konig st.	1,155 00	
Mayor and City Council	Balto. st., nr. Aisquith	300 00	
Mayor and City Council	Lombard st., nr. High.	150 00	
Mayor and City Council	Rogers av. and Low st.	540 00	
Mayor and City Council	e. s. Woodberry lane.	22 50	
Mayor and City Council	Ann and Aliceanna sts.	22 50	
Mayor and City Council	York road, Waverly	75 00	
Mayor and City Council	Brunswick st., bet. Frederick & Wilkens avs.	61 50	
Mayor and City Council	Harlem ave. and Monroe street	480 00	
Amounts brought forward		$20,968 95	$4,781 88

Lessees.	*Location of Lots.*		*Annual Rental.*
Amounts carried forward		$20,968 95	$4,781 88
Mayor and City Council	Eastern av. & Streeper street	1,001 00	
Mayor and City Council	Stiles st., nr. Gough	50 00	
Mayor and City Council	Lehman st. and Millington avenue	240 00	
Mayor and City Council	Biddle st., nr. Pennsylvania avenue	1,500 00	
Mayor and City Council	Patterson Park avenue and McElderry street	530 00	
Mayor and City Council	Francis st., nr. Fulton avenue	450 00	
Mayor and City Council	Chester and Chew sts.	829 75	
Mayor and City Council	Pennsylvania ave., nr. Dolphin street	1,147 50	
Mayor and City Council	Old City Hall, Holliday street	306 00	
Mayor and City Council	Ramsay & Pulaski sts.	480 00	
			27,503 20
			$32,285 08

(Purchased at a cost of $477,139.46.)

STATEMENT No. 8.

CASH BALANCES OF FUNDS DECEMBER 31, 1913.

General Sinking Fund		$2.166 33
Public Park Sinking Fund No. 2		256 40
W. M. R. R. Sinking Fund		4,822 18
Water 1916 Loan Sinking Fund		4,181 89
Water 1926 Loan Sinking Fund		1,371 31
Water 1943 Loan Sinking Fund		931 54
Water 1958 Loan Sinking Fund		244 24
Conduit 1922 Loan Sinking Fund		1,322 59
Conduit 1928 Loan Sinking Fund		1,910 69
Conduit 1958 Loan Sinking Fund		529 18
Conduit 1962 Loan Sinking Fund		339 83
Internal Improvement 1928 Loan Sinking Fund		2,924 66
Funding 1936 Loan Sinking Fund		2,136 71
Public Improvement 1940 Loan Sinking Fund		2,220 03
Refunding 1940 Loan Sinking Fund		2,211 02
Four Million 1945 Loan Sinking Fund		830 45
Annex Improvement 1951 Loan Sinking Fund		328 06
Annex Improvement 1954 Loan Sinking Fund		281 86
Paving 1951 Loan Sinking Fund		190 27
Burnt District Improvement 1954 Loan Sinking Fund		2.197 20
Burnt District Improvement 1960 Loan Sinking Fund		202 35
Public Park Improvement 1955 Loan Sinking Fund		413 30
New Engine House 1957 Loan Sinking Fund		546 50
New School House 1957 Loan Sinking Fund		546 50
School House 1961 Loan Sinking Fund		182 50
Dock Improvement 1961 Loan Sinking Fund		599 55
Jones' Falls Improvement 1961 Loan Sinking Fund		404 20
New Sewerage Improvement 1961 Loan Sinking Fund		564 69
New Sewerage Improvement 1980 Loan Sinking Fund		396 62
Fund for redemption of Five Million 1890 Loan		200 00
		$35.452 71
Enoch Pratt Free Library Fund	$1,284 85	
Horwitz Benevolent Fund	504 15	
		1.789 00
		$37,241 74

STATEMENT No. 9—FUNDED DEBT—DECEMBER 31, 1913.

Checks for interest, as it becomes due, are mailed direct to the holders of Baltimore city stock.

Name of Loan.	Rate.	Interest Periods.	Authority for Issue.	When Redeemable.	Amount Issued.
Water	5 per cent.	May and Nov.	Ord. No. 65, 1877	On or after July 1, 1916	$5,000,000 00
Funding	5 per cent.	May and Nov.	Ord. No. 93, 1878	At pleasure after July 1, 1916	1,000,000 00
McDonogh Extension	5 per cent.	Mar. and Sept.	Ord. No. 157, 1890	September 1, 1916	280,000 00
Harford Run	4 per cent.	Jan. and July	Ord. No. 86, 1879	At pleasure after January 1, 1920	250,000 00
Patterson Park Ext'n.	4 per cent.	Quarterly.	Ord. No. 120, 1882	October 1, 1920	200,000 00
Paving	4 per cent.	May and Nov.	Ord. No. 140, 1880	At pleasure after November 1, 1920	500,000 00
W. M. R. R.	4 per cent.	Jan. and July	Ord. No. 71, 1882	July 1, 1925	684,000 00
Water	4 per cent.	May and Nov.	Ord. No. 82, 1886	At pleasure on or after November 1, 1926	1,000,000 00
Paving	4 per cent.	Feb. and Aug.	Ord. No. 661, 1911	August 1, 1951	2,500,000 00
Annex Improvement	4 per cent.	Feb. and Aug.	Ord. No. 662, 1911	August 1, 1951	725,000 00
Annex Improvement	4 per cent.	June and Dec.	Ord. No. 216, 1905	June 1, 1954	2,000,000 00
Public Park Impt.	4 per cent.	May and Nov.	Ord. No. 228, 1905	May 1, 1955	1,000,000 00
New Engine House	4 per cent.	June and Dec.	Ord. No. 239, 1907	June 1, 1957	1,000,000 00
New School House	4 per cent.	June and Dec.	Ord. No. 240, 1907	June 1, 1957	1,000,000 00
Conduit	4 per cent.	June and Dec.	Ord. No. 142, 1908	December 1, 1958	1,000,000 00
Water	4 per cent.	June and Dec.	Ord. No. 141, 1908	December 1, 1958	2,100,000 00
Burnt District Impt.	4 per cent	April and Oct.	Ord. No. 391, 1909	April 1, 1960	685,000 00
Jones' Falls Impt.	4 per cent.	Mar. and Sept.	Ord. No. 555, 1910	March 1, 1961	700,000 00
School House	4 per cent.	Mar. and Sept.	Ord. No. 556, 1910	March 1, 1961	890,000 00
Dock Impt.	4 per cent.	Mar. and Sept.	Ord. No. 557, 1910	March 1, 1961	970,000 00
New Sewerage Impt.	4 per cent	Feb. and Aug.	Ord. No. 653, 1911	August 1, 1961	5,975,000 00
Conduit	4 per cent.	Feb. and Aug.	Ord. No. 162, 1912	August 1, 1962	375,000 00
		Amount carried forward			$29,834,000 00

STATEMENT No. 9—FUNDED DEBT—DECEMBER 31, 1913—*Concluded.*

Checks for interest, as it becomes due, are mailed direct to the holders of Baltimore city stock.

NAME OF LOAN.	RATE.	INTEREST PERIODS.	AUTHORITY FOR ISSUE.	WHEN REDEEMABLE.	AMOUNT ISSUED.
			Amount brought	*forward*	$29,834,000 00
Conduit	3½ per cent.	Jan. and July	Ord. No. 120, 1896	January 1, 1922	1,000,000 00
Conduit	3½ per cent.	Jan. and July	Ord. No. 87, 1902	January 1, 1928	1,000,000 00
Internal Improvement	3½ per cent.	Jan. and July	Ord. No. 98, 1888	July 1, 1928	4,850,000 00
Consolidated	3½ per cent.	Jan. and July	Ord. No. 58, 1890	At pleasure after July 1, 1930	5,000,000 00
Funding	3½ per cent.	Jan. and July	Ord. No. 112, 1896	July 1, 1936	1,453,300 00
Public Improvement	3½ per cent.	Jan. and July	Ord. No. 100, 1892	January 1, 1940	6,000,000 00
Refunding	3½ per cent.	Jan. and July	Ord. No. 32½, 1898	January 1, 1940	4,300,000 00
Water	3½ per cent.	Jan. and July	Ord. No. 86, 1902	At pleasure on or after January 1, 1943	1,000,000 00
Four Million	3½ per cent.	Mar. and Sept.	Ord. No. 137, 1894	March 1, 1945	4,000,000 00
W. M. R. R. Refunding	3½ per cent.	Mar. and Sept.	Ord. No. 18, 1898 Ord. No. 32, 1900	March 1, 1950	875,000 00
W. M. R. R. Refunding	3½ per cent.	Jan. and July	Ord. No. 18, 1898 Ord. No. 32, 1900	January 1, 1952	1,000,000 00
Burnt District Impt.	3½ per cent.	June and Dec.	Ord. No. 71, 1904	June 1, 1954	6,000,000 00
New Sewerage Impt.	3½ per cent.	April and Oct.	Ord. No. 227, 1905	October 1, 1980	10,000,000 00
W. M. R. R.	3¼ per cent.	Jan. and July	Ord. No. 11, 1886	January 1, 1927	1,704,000 00
General Fund Bonds	¼ per cent.	Mar. and Sept.	Ord. No. 564, 1910	March 1, 1955	900,000 00
Stock due in 1860	6 per cent.			Unredeemed, no int. allowed	482 00
Water Stock due in 1875	6 per cent.			Unredeemed, no int. allowed	270 00
Con. Stock due in 1890	6 per cent.			Unredeemed, no int. allowed	427 50
Five Million Stock due in 1890	6 per cent.			Unredeemed, no int. allowed	200 00
				Total Funded Debt	$78,917,679 50

STATEMENT No 10—ISSUES OF BALTIMORE CITY STOCK HELD BY THE COMMISSIONERS OF FINA

NAME OF LOAN.	General Sinking Fund	Public Park Sinking Fund No	W. M. R. R. Sinking Fund	Water Sinking Fund 1916.	Conduit Sinking Fund 1922	Water Sinking Fund 1926.	Conduit Sinking Fund 1928	Internal Imp Sinking Fund 1928	Funding Sinking Fund 1936	Public Imp Sinking Fund 1940	Refunding Sinking Fund 1940.	Water Sinking Fund 1943	Four Million Sinking Fund 1945.	Annex Imp. Sinking Fund 1951.	Paving Sinking Fund 1951.	Annex Imp Sinking Fund 1954
General Fund Bonds [illegible] 1955 Loan	$105,000 00				$33,000 00	$102,000 00	$33,000 00	$240,000 00	$78,000 00	$63,000 00	$135,000 00					
W. M. R. R. 3¼% 1927 Loan	477,300 00	$15,[illegible] 00	$123,000 00	$8[illegible],900 00		39,300 00		212,000 00	18,000 00	66,000 00	31,300 00		$10,000 00			
Conduit 3½% 1922 Loan.	[illegible]10,000 00	23,000 00		83,000 00	146,000 00	88,000 00		50,000 00	20,000 00	25,000 00	52,000 00					
Conduit 3½% 1928 Loan.	116,100 00	19,100 00		121,900 00	43,800 00	76,800 00	125,900 00	129,400 00	41,100 00	40,600 00	73,500 00	$5,600 00	39,700 00			$2,200 00
Internal Improvement 3½% 1928 Loan					20,000 00	10,000 00	10,300 00	454,600 00				12,000 00				
Consolidated 3½% 1930 Loan.	[illegible]57,659 97	3,000 00	1,700 00	50,000 00	3,300 00	31,600 00		49,800 00	400 00	40,800 00	3,000 00					
Funding 3½% 1936 Loan.	48,500 00	15,000 00			20,000 00			5,000 00	52,800 00	20,000 00	10,000 00		10,000 00			
Public Improvement 3½% 1940 Loan.	680,000 00	31,[illegible] 00		104,200 00	8,100 00	160,600 00	3,000 00	485,600 00	58,300 00	636,000 00	74,000 00	3,000 00	124,200 00			
Refunding 3½% 1940 Loan	353,000 00	9,[illegible] 00	7,000 00	117,000 00	5,000 00	30,000 00		82,500 00	20,000 00	50,000 00	622,400 00		12,000 00			
Water 3½% 1943 Loan	60,500 00	22,[illegible] 00		121,400 00	29,900 00	32,000 00	23,000 00	112,900 00	34,800 00	66,600 00	61,600 00	27,400 00	17,400 00			30,600 00
Four Million 3½% 1945 Loan	548,200 00	60,[illegible] 00	14,500 00	466,000 00	19,000 00	97,700 00		347,500 00	164,400 00	162,500 00	88,600 00	15,000 00	194,000 00			
W. M. R. R. Refunding 3½% 1950 Loan		10,[illegible] 00							20,000 00				10,000 00			
W. M. R. R. Refunding 3½% 1952 Loan	100,000 00			100,000 00						3,000 00						
Burnt District Improvement 3½% 1954 Loan	18[illegible],600 00	67,800 00		318,600 00	115,100 00	144,200 00	74,300 00	394,300 00	105,500 00	261,600 00	240,500 00	39,800 00	80,500 00			87,900 00
New Sewerage Improvement 3½% 1980 Loan	547,000 00	119,[illegible] 00		503,700 00	112,000 00	133,200 00	108,000 00	445,000 00	131,900 00	296,000 00	275,700 00	61,900 00	112,400 00	$29,500 00	$61,200 00	68,900 00
Harford Run 4% 1920 Loan	[illegible]					3,800 00		7,700 00	500 00	3,600 00						
Paving 4% 1920 Loan	3,400 00															
Patterson Park Extension 4% 1920 Loan	5,000 00															
W. M. R. R. 4% 1925 Loan	36,800 00	3,[illegible]		900 00	26,000 00	10,800 00	28,000 00	16,300 00	4,000 00	600 00		1,500 00	3,000 00			
Water 4% 1926 Loan	500 00		50,000 00			23,100 00				1,500 00		500 00				
Paving 4% 1951 Loan.	83,200 00	[illegible]		90,400 00	20,600 00	32,100 00	15,400 00	78,100 00	20,000 00	13,700 00	32,400 00	2,400 00	16,800 00	30,000 00	60,100 00	20,200 00
New Sewerage Improvement 4% 1961 Loan.	33,100 00	19,[illegible]		35,200 00	21,200 00	17,600 00	24,500 00	16,700 00	16,100 00	11,700 00	14,500 00	11,800 00	13,900 00	2,100 00	4,700 00	7,800 00
School House 4% 1961 Loan	9,000 00	2,[illegible]		10,000 00	3,000 00		2,000 00	7,000 00	4,000 00	2,000 00	5,000 00		2,000 00			
Water 5% 1916 Loan	35,100 00	3,[illegible]		908,000 00		109,000 00		132,000 00		10,000 00		9,400 00				
Funding 5% 1916 Loan	47,900 00			33,600 00		3,100 00		8,900 00				4,700 00				
	$4,270,259 97	$151,[illegible]	$196,200 00	$3,124,800 00	$620,000 00	$1,144,000 00	$447,400 00	$3,275,300 00	789,800 00	$1,774,200 00	$1,719,500 00	$195,000 00	$645,900 00	61,600 00	$126,000 00	$217,600 00

ANCE IN THE SINKING AND SPECIAL FUNDS, DECEMBER 31, 1913.

Burnt District Improvement Sinking Fund 1954.	Public Park Improvement Sinking Fund 1955	New Engine House Sinking Fund 1957.	New School House Sinking Fund 1957	Conduit Sinking Fund 1958	Water Sinking Fund 1958.	Burnt District Improvement Sinking Fund 1960.	Dock Improvement Sinking Fund 1961.	Jones' Falls Improvement Sinking Fund 1961.	New Sewerage Improvement Sinking Fund 1961	School House Sinking Fund 1961	Conduit Sinking Fund 1962	New Sewerage Improvement Sinking Fund 1980	**Totals Held in Sinking Funds.**	Enoch Pratt Free Library Fund.	Horwitz Benevolent Fund.	Fred'k Raine Fund.	**Totals Held in Special Funds.**
$111,000 00													**$900,000 00**				
37,900 00													**1,091,000 00**	$17,900 00	$1,500 00		**$19,400 00**
													727,000 00	38,000 00			**38,000 00**
29,300 00	$900 00	$700 00	$700 00									$3,500 00	**870,800 00**	25,300 00	400 00		**25,700 00**
													506,900 00	18,200 00	100 00		**18,300 00**
9,700 00													**450,959 97**	113,200 00	1,300 00		**114,500 00**
													161,300 00	8,000 00			**8,000 00**
3,000 00								$4,000 00	$41,000 00	$3,000 00			**2,423,100 00**	204,400 00	3,000 00	$400 00	**207,800 00**
									14,300 00				**1,322,700 00**	160,100 00	6,400 00		**166,500 00**
170,700 00	1,300 00	25,800 00	25,800 00	$10,100 00								7,000 00	**882,300 00**	24,500 00	700 00		**25,200 00**
													2,177,800 00	94,400 00	1,600 00		**96,000 00**
													40,000 00	10,000 00			**10,000 00**
													203,000 00				
27 800 00	35,900 00	17,600 00	17,600 00	7,600 00								149,100 00	**2,920,300 00**	83,100 00	1,100 00		**84,200 00**
18 ,000 00	31,600 00	32,600 00	32,600 00	32,300 00	$158,800 00	$23,900 00	$33,200 00	$16,400 00		$29,100 00		134,200 00	**3,715,100 00**	101,100 00	600 00		**101,700 00**
													39,100 00	900 00			**900 00**
													3,400 00	62,300 00			**62,300 00**
													5,000 00	195,000 00			**195,000 00**
									49,000 00				**179,900 00**	6,100 00	300 00		**6,400 00**
													75,600 00	1,000 00			**1,000 00**
31,700 00	1,100 00	900 00	900 00	700 00	40,700 00	8,000 00	15,700 00	300 00	31,400 00	500 00	$15,200 00	42,000 00	**728,900 00**	21,100 00			**21,100 00**
3 ,200 00	12,100 00	12,200 00	12,200 00	9,700 00	7,600 00	1,100 00	1,400 00	4,600 00	26,200 00	10,600 00	300 00	12,500 00	**391,900 00**	8,100 00			**8,100 00**
4,000 00													**50,000 00**				
10,000 00													**1,217,200 00**	76,900 00	400 00		**77,300 00**
													98,200 00	5,500 00	2,600 00		**8,100 00**
$898,300 00	$82,900 00	$89,800 00	$89,800 00	$60,400 00	$207,100 00	$33,000 00	$50,300 00	$25,300 00	$161,900 00	$43,200 00	$15,500 00	$348,900 00	**$21,181,459 97**	$1,275,100 00	$20,000 00	$400 00	**$1,295,500 00**

ANNUAL REPORT

OF THE

CITY ENGINEER

TO THE

MAYOR AND CITY COUNCIL OF BALTIMORE

FOR THE

FISCAL YEAR ENDING DECEMBER 31, 1913

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER

1914

ORGANIZATION OF THE

CITY ENGINEER'S DEPARTMENT

H. K. McCAY.......................................City Engineer.
GEORGE M. BOTELER...............Chief Clerk and Paymaster.

Sub-Division of Street Repairs.

Sub-Division of New Paving.

Sub-Division of Bridges.

Sub-Division of Sewers.

Sub-Division of Sewers, House Connections.

Sub-Division of Inspection.

Sub-Division of Footway Inspection.

Sub-Division of Municipal Laboratory.

Sub-Division of Forestry.

INSTRUCTIONS TO FOREMEN AND OTHER EMPLOYEES

1. Foremen must be on the ground not later than 6.45 A. M., in order that the work may begin promptly at 7 o'clock.

2. Eight hours constitutes a day's work, and each man will be allowed only for the actual time worked.

3. The hours for every working day will be from 7 o'clock A. M. until 4 o'clock P. M., with one hour, 12 o'clock noon to 1 o'clock P. M., for dinner.

4. Gangs must not be worked overtime if it can be avoided.

5. Foremen must not leave the work without permission. If anything is needed, report it to the engineer in charge, his assistants, or send a message to the City Hall. When necessary for foremen or men to be at the City Hall, business must be promptly transacted; they will not be allowed to remain in or about the Hall.

6. Foremen will be held responsible for the amount and character of work done, and for the orderly behavior and industry of their men.

7. Foremen must lay out the work for their men and not select a paver to act as boss paver over the other men.

8. Foremen must not allow mechanics, pavers, rammers or carters to work as laborers, unless expressly authorized to do so by the engineer in charge.

9. Work must be so planned as to obstruct travel and inconvenience the public as little as possible. Refuse material must not be allowed to accumulate on the work. Streets must be in safe condition when the force leaves, and the proper lights and guards set.

10. A careful record must be kept of each man's time, with the dates, location, kind of work, and all facts necessary to make up correct payrolls and accounts of the work, and report to the engineer in charge or his assistants.

11. Foremen must keep a careful record of all tools and materials received and delivered; they will be held responsible for the economical use of materials, and must account for all losses and breakage of all tools. All broken or worn-out tools must be returned to the Property Yard.

12. No repaving must be done on rainy days, when the ground is soft, and the sand too wet. No time to be allowed on rainy days, except for service rendered.

13. It must be the constant effort to have good work done at the least cost to the city.

14. As little time as possible must be lost in moving from one job to another, and foremen must learn in advance where they are to go next.

15. Any employee who shall absent himself from the works, without good and sufficient cause, will be dismissed and his place filled by another man.

16. Any employee found under the influence of liquor, or using profane and abusive language, negligent, insubordinate, or in any way interfering with or obstructing the work, shall be promptly suspended by the foreman. A written report, giving the facts in the case, must be immediately transmitted to the engineer in charge, signed by the foreman.

17. Foremen must not frequent saloons under any pretext whatever during working hours, nor permit any one under their charge to do so. Anyone not complying with this order will be liable to dismissal.

18. All orders or tickets for material on Property Yard, or on contractors, must be written and signed by the foreman.

19. Foremen will in all cases make written reports of any accident, of however trifling a nature, that may occur on their work, giving date, names and addresses of witnesses, etc.

20 Any employee on the work who shall solicit contributions of contractors furnishing material, or of any other person, will be dismissed at once.

21. Foremen will be provided with copies of specifications for materials, and must carefully read the same, and must accept only material in accordance with said specifications.

22. The use of the city's tools or materials by any one, in doing private work in or out of working hours, is strictly forbidden; any violation of this order will be followed by immediate dismissal.

23. Foremen must carefully read the foregoing rules, familiarize themselves with them, and see that those employed under them also fully understand the rules.

REPORT

BALTIMORE, January 2, 1914.

To the Honorable the Mayor and City Council of Baltimore.

GENTLEMEN—I herewith submit the following report of the operations of the City Engineer's Department during the year 1913. The Department has been engaged in the installation of three important pieces of work during the past year and has pushed the construction of this work with considerable energy. These pieces of work were the paving of the Fallsway; the grading, paving and construction of the Key Highway and the completion of the overhead crossings to eliminate the grade crossings on the Baltimore and Ohio Railroad in South Baltimore. This construction work was undertaken in addition to the usual work of the Department of Street Repairs, but was operated with practically the same force and at very little additional expense.

FALLSWAY.

The first section of the Fallsway has been completed from Baltimore street to Bath street and opened for traffic. The second section, from Bath street to Madison street, has been contracted for and, at this time, the entire square from Madison street to Monument street has been paved. The viaduct, or third section, is under contract. It has progressed so far that the concrete walls and arches are rapidly assuming shape and work will be continued as long as the weather permits.

KEY HIGHWAY.

The contract for paving the first section of the Key Highway has been let and at the present time the highway has been very nearly paved along the south side thereof from Light street to Covington street, and if the weather is favorable this will be completed within the next week.

BALTIMORE AND OHIO RAILROAD GRADE CROSSINGS.

The Ostend Street Viaduct of the Baltimore and Ohio Railroad has been completed and formally accepted by the city. This was opened for traffic on November 24. In connection with this viaduct, Ostend street has been improved to Ridgely street—a distance of two squares. These squares have been paved with smooth pavement (bituminous concrete being used), which makes a complete connection between Charles street and Ridgely street. This is one of the most important improvements that has been completed in South Baltimore during the year.

The Lee Street Viaduct, entrance to which is on Barre street, is about completed.

There is only one more viaduct to be constructed—namely, Cross street—and it is expected that this viaduct will be constructed this coming year. It will be noted that there have been two viaducts—namely, the Stockholm (or Ostend) street and the Lee street—completed this year.

REPAIR DIVISION.

The operations of the Repair Division are thoroughly described in the report of Assistant City Engineer Vandevanter, which is herewith attached.

FOOTWAY DIVISION.

I call your particular attention to the Footway Division, which has been extremely active, as shown by the following statement:

Total number of notices sent out to property-owners (showing an increase over 1912 of 4,523)	11,023
Total number of notices to lay concrete footways	8,088
Total number of square feet of concrete footways laid	1,485,733
Total number of concrete footways laid (showing an increase over 1912 of 5,867)	7,442
Total number of repairs made to footways	2,935
Total number of surface drains put under footways (showing an increase over 1912 of 2,299)	3,174
Total number of investigations made concerning footways (showing an increase over 1912 of 709)	10,000

PRIVATE PAVING AND INSPECTION.

I call your attention to the increased activities of the Construction Department of the Private Paving and Inspection Division. This Division, during the past year, has installed work amounting to $192,047.76. As a flat charge of 10 per cent. is made on all of this work, this Division earned for the city the sum of $19,204.77.

SEWER CONNECTIONS.

The Division of Sanitary Sewer Connections during the past year has made 1,931 contracts on which there is a profit of $5, making a profit of $9,655; the expense of this Division being $1,002.55, a net profit of $8,652.45 was left.

INSPECTION BUREAU.

The Inspection Bureau, which was formerly operated at an expense of $8,000 annually, shows a profit of $1,660—a net saving to the city of $9,660.

On my recommendation, the City Council adopted an ordinance changing the grade of the approaches to the Cross Street Viaduct over the tracks of the Baltimore and Ohio Railroad, which affected a saving of $51,000 by reason of not having to change the grades and repave Eutaw street, Warner street, Cross street and Howard street.

RECAPITULATION.

To summarize the above-mentioned savings and to show the efficiency with which the Department has been operated, I would recapitulate as follows:

Saving on Cross Street Viaduct	$51,000 00
Purchasing of cement in bulk	5,150 00
Inspection Bureau saving	9,660 00
Earned by Private Paving and Inspection	19,204 77
Sanitary sewer connections	8,652 45
Balance, due to new paving rates	7,171 05
	$100,838 27

SALE OF OLD MATERIAL.

The activity of every division of this Department during the past year has been pronounced. The division having charge of the sale of old material during the year has turned over to the City Register the sum of $9.509.57; this being nearly twice the amount received from the sale of old material during the year 1912.

MUNICIPAL GARAGE.

The Department has assumed, during the past year, the complete control of the municipal garage.

BUREAU OF INFORMATION AND COMPLAINTS.

Under the direction of your Honor, I have assumed charge of the Bureau of Information and Complaints and it is expected that this bureau will be in full working order within the next thirty days.

RECOMMENDATION.

I renew my recommendation, made to the Board of Estimates during the past year, for the extension of the Fallsway to Lombard street by means of a proper roof on which the paving can be laid. The sewerage work of caring for the flow of the Falls has been completed and if the proper roof is built between the present walls of the Falls this highway can be extended to Lombard street and to Pratt street with comparatively little expense. This would give a most excellent outlet for traffic that uses this low-grade street, which would practically connect the railroad stations in the center of the city with the wharves and President Street Station in South Baltimore.

I also have recommended to the Board of Estimates, which recommendation has been approved by your Honorable Body, the establishment of a municipal asphalt plant, the establishment of which, I believe, will effect a large saving to the city.

I desire to take this occasion to call attention to the efficiency of the various divisions of this Department. Each division is in charge of a capable and zealous engineer, each one of which is endeavoring to make a record for his division and to facilitate as much as possible the operation of his division and the efficiency of the entire Department.

Respectfully submitted,

H. K. McCay,
City Engineer.

AMOUNT EXPENDED IN THE CITY ENGINEER'S DEPARTMENT FROM JANUARY 1, 1900, TO DECEMBER 31, 1913.

YEAR.	Amount Expended in Old City.	Amount Expended in Annex.	Totals.
1900	$254,984 61	$39,893 55	$294,878 16
1901	304,255 89	37,858 57	342,114 46
1902	435,648 93	79,418 44	515,067 37
1903	409,804 15	46,494 24	456,298 39
1904	444,853 12	55,798 99	500,652 11
1905	645,459 76	69,041 12	714,500 88
1906	634,168 48	132,283 68	766,452 16
1907	608,651 25	142,904 95	751,556 20
1908	621,591 34	199,104 19	820,695 53
1909	775,777 05	223,445 21	999,222 26
1910	653,581 63	167,033 64	820,615 27
1911	638,293 07	91,564 51	729,857 58
1912	610,287 45	92,089 15	702,376 60
1913	504,409 27	115,307 57	1,116,938 73
Private Paving and Inspection	311,762 55		
New sewerage system connections	173,872 62		
Paving private footways	11,586 72		

GENERAL INFORMATION.

The total mileage and area of paved and unpaved streets and alleys in the City of Baltimore, corrected to December 31, 1913, is as follows:

Character of Surface.	Streets.		Alleys.		Totals.		Under Guarantee, Sq. Yds.	Under Maintenance, Sq. Yds.
	Mileage.	Sq. Yds.	Mileage.	Sq. Yds.	Mileage.	Sq. Yds.		
Allcott's improved pavement	0.48	9,101	....	....	0.48	9,101	....	9,101
Amiesite	0.20	4,600	....	....	0.20	4,600	....	4,600
Asphalt block	16.39	414,348	2.74	18,854	19.13	433,202	....	433,202
Bitulithic	9.98	269,948	....	....	9.98	269,948	119,666	150,282
Bituminous concrete	11.79	242,498	....	....	11.79	242,498	228,305	14,193
Cement surface	....	....	2.95	18,735	2.95	18,735	....	18,735
Cobblestone	190.88	3,452,127	113.24	770,034	304.12	4,222,161	....	4,222,161
Granite block	40.26	954,824	0.68	7,571	40.94	962,395	196,584	765,811
Macadam (bituminous)	1.87	59,061	....	....	1.87	59,061	....	59,061
Macadam (ordinary)	38.60	861,921	0.17	1,360	38.77	863,281	....	863,281
Medina block	0.06	2,039	....	....	0.06	2,039	....	2,039
Sheet asphalt	48.70	1,065,829	....	....	48.70	1,065,829	504,254	561,575
Unpaved	30.94	553,293	18.06	150,295	49.00	703,588	....	703,588
Vitrified block	37.90	885,217	4.50	10,147	42.40	895,364	125,108	770,256
Wood block	1.46	45,581	....	....	1.46	45,581	7,757	37,824
Totals	429.51	8,820,387	142.34	976,996	571.85	9,797,383	1,181,674	8,615,709

NOTE—The classification here made is: Where the thoroughfare is paved and curbed and footways provided it is called a street, regardless of its width. All thoroughfares twenty (20) feet wide and under, which are not curbed, paved and provided with sidewalks, are classed as alleys.

The above table does not include any work of the State Roads Commission, Annex Commission or of this Department for which contracts have been entered into and remain uncompleted December 31, 1913.

MONEYS RECEIVED BY THE CITY ENGINEER'S DEPARTMENT DURING THE YEAR 1913.

There was received in the City Engineer's Department, during the year 1913, $256,535.44, which was duly forwarded to the City Comptroller:

RECEIPTS BY MONTHS, ACCOUNT PRIVATE PAVING AND INSPECTION.

January	$19,583 02
February	6,365 31
March	20,049 80
April	8,626 14
May	19,673 95
June	13,475 57
July	19,995 69
August	14,166 12
September	26,651 36
October	26,421 74
November	12,254 28
December	59,762 89
	$247,025 87
Amounts received and credited to revenue account:	
From sale of old material	*9,509 57
Total	$256,535 44

*Comparison with other years for sale of old material:

Year of 1900	$1,214 72
Year of 1901	1,696 00
Year of 1902	533 00
Year of 1903	1,591 55
Year of 1904	2,359 36
Year of 1905	3,000 38
Year of 1906	3,249 30
Year of 1907	2,393 24
Year of 1908	5,566 20
Year of 1909	3,217 52
Year of 1910	5,311 16
Year of 1911	3,084 69
Year of 1912	5,658 84
Year of 1913	9,509 57

FINANCIAL STATEMENT

FINANCIAL STATEMENT.

The City Council Made the Following Appropriations, Provided for in the Tax Levy for 1913.

Names of Accounts.	Appropriation.	Received from Contingent Fund and Other Sources.	Balance Carried Forward From 1912.	Total Available.	Total Expended.	Balances Dec. 31, 1913.	Balances Available for 1914.
Paving, repaving and resurfacing roads and streets	$307,050 00	$12,126 25	....	$319,176 25	$319,106 27	$69 98	....
Repairs to sewers	15,000 00	92 56	....	15,092 56	14,614 00	478 56	....
Maintenance of bridges and culverts	18,000 00	7,237 11	....	25,237 11	25,151 49	85 62	....
Paving and repairing cross streets and paving in front of city property	45,000 00	10	....	45,000 10	44,843 12	156 98	....
Livery and transportation	3,500 00	....	....	3,500 00	3,500 00	....	....
Footway crossings	1,000 00	....	....	1,000 00	624 12	375 88	....
Maintenance of property yard	2,800 00	....	....	2,800 00	2,782 69	17 31	....
Incidentals	1,000 00	....	....	1,000 00	999 53	47	....
Advertising	300 00	....	....	300 00	243 40	56 60	....
Improvements in and additions to the drainage system	24,000 00	449 06	....	24,449 06	24,361 73	87 33	....
Grade establishments	5,000 00	1,783 02	....	6,783 02	5,474 79	1,308 23	....
Paving private alleys	3,000 00	3,738 37	$2,000 00	8,738 37	5,403 00	....	$3,335 37
Laying dust and preserving macadam roads	12,000 00	....	....	12,000 00	11,793 39	206 61	....
Emergency Fund	10,000 00	....	....	10,000 00	10,000 00	....	....
Salaries	43,880 00	50 00	....	43,930 00	39,769 63	4,160 37	....
Expenses, City Forester	5,000 00	63 55	....	5,063 55	5,053 59	9 96	....

Completion of paving of Ridgely street, from B. & O. R. R. to Fremont avenue			12,869 58	12,869 58		12,869 58	
Underpinning buildings on Howard, Eutaw and Hamburg streets			405 24	405 24			405 24
Railroad siding and tramway at Bay View		218 40	3,604 41	3,822 81	3,822 81		
Encasing lower members of Calvert Street Bridge in concrete	7,000 00			7,000 00	7,000 00		
Paving Mulberry, Saratoga and Pulaski streets	5,000 00			5,000 00	2,460 71	2,539 29	
Regrading, repaving and underpinning walls on Howard, Stockholm, Eutaw and neighboring streets	25,000 00			25,000 00	23,715 27		1,284 73
Improvements on Baker street, from Seventh street westerly 100 feet	1,090 00			1,090 00			1,090 00
Regrading, repaving and curbing Madison street, from east side of Luzerne street to west side of Grove alley (Ordinance No. 25, 1912)	2,593 97			2,593 97	2,557 91	36 06	
Regrading, repaving and curbing Garrett street, from west side of Park avenue to the east side of Howard street (Ordinance No. 133, 1912)	2,600 00			2,600 00	2,500 00	100 00	
Municipal Garage		803 12		803 12	800 00	3 12	
New sewerage system connections			63,139 39	63,139 39	63,139 39		
Totals from tax levy	$539,813 97	$26,561 54	$82,018 62	$648,394 13	$619,716 84	$22,561 95	$6,115 34

SUMMARY OF EXPENDITURES DURING THE YEAR 1913.

From tax levy	$619,716 84
Private paving and inspection	311,762 55
New sewerage system connections	173,872 62
Paving private footways	11,586 72
	$1,116,938 73

REPORT OF

C. O. VANDEVANTER, *Assistant City Engineer*

SUB-DIVISION OF STREET REPAIRS AND NEW PAVING

Report of C. O. Vandevanter, Assistant City Engineer
1913

City Engineer's Department,
Sub-Division of Street Repairs and New Paving,
Baltimore, January 1, 1914.

Mr. H. K. McCay, *City Engineer.*

Dear Sir—I beg to submit the following report of operations in the Division of Street Repairs and Maintenance during the year 1913.

This comprised the repair and maintenance of all streets, roads and alleys in the city not under a contractor's guarantee (except in cases where a contractor holding such a guarantee failed to obey the Department's order to make repairs, in which case, this Division makes them on guaranteed streets), laying new flag and vitrified block crossings, the laying of improved paving under special ordinances, the repaving over trenches opened by various corporations and individuals, including all city departments; the maintenance and supervision of the city property yards and the readjustment of street intersections where storm-water inlets have been constructed.

During the year 1913 a number of streets were paved with new pavements in the Annex, in the old city limits and for the Paving Commission, four of which it was thought best to give more in detail than is usually done.

On the south side of University Parkway, from the east curb line of Charles street to the west curb line of St. Paul street, this street was narrowed by moving the gutter toward the center line five feet, throwing this into a parkway between the gutter and the footway and the balance of the street was rebuilt by this Department, using bituminous concrete.

Edmondson avenue, from the west end of the bridge over Gwynn's Falls to the western city line, was rebuilt by laying a strip of bituminous concrete eighteen feet wide, the south edge of which was five feet from the north rail of the United Railways and Electric Company, and repaving on the north side of this with cobble to the gutter—the bituminous concrete being applied by a contractor.

Pratt street, from the header on the west side of President street to the west building line of Central avenue, which was a granite block street on a sand base, was repaved by the use of granite blocks on concrete base, with a tar and gravel filler. This street was widened by setting the curb back one foot on each side, thus increasing the width two feet.

Tables are attached showing the detailed cost of these streets.

New Pavements Laid.

The amounts of new pavements laid by contract and by the Department's labor are given below:

Kind of Pavement.	Lengths (All Widths) Feet.	Square Yards.
Sheet asphalt	....	....
Vitrified block	2,644.7	5,487.9
Granite block with white oak keys	700.0	2,727.0
Granite block	6,775.6	36,256.3
Macadam (ordinary)	160.0	320.0
Macadam (bituminous)	667.0	2,445.5
Bituminous concrete on concrete	....	1,910.5
Bituminous concrete on cobble	1,788.9	6,326.2
Bituminous concrete on macadam	6,744.0	9,997.6
Asphalt block on concrete	331.0	1,030.0
Sandstone block	300.0	522.0
Cobble	4,826.0	5,808.0
Total length, based on 30-ft. street (4.14 mi.)	24,937.2	72,831.0

STREETS AND STREET INTERSECTIONS PAVED WITH NEW PAVEMENTS IN 1913.

(Streets in Old City Limits.)

Street.	From.	To.	Pavement.	Length in Feet.	Area, Square Yards.	Guaranteed by Contractor.
Fallsway, 1st section.	400 ft. N. of Bath st.	S. B. L. Baltimore st.	Granite block on concrete..	2,600.0	15,583.0	D. M. Andrew Co.
*Fallsway, 2d section.	150 ft. S. of Centre st.	N. B. L. Madison st.	Granite block on concrete..	....	1,935.0	D. M. Andrew Co.
*Key Highway.......	S. B. L. Lee st......	N. B. L. Montgomery st..................	Granite block on concrete..	....	5,334.0	Consol. Eng. Co.
Ostend st...........	E. B. L. Ridgely st..	W. B. L. Russell st.	Bituminous macadam......	335.0	1,228.3	Paved by the Dept.
Ostend st...........	E. B. L. Russell st..	W. B. L. Warner st.	Bituminous macadam......	332.0	1,217.3	Paved by the Dept.
Ostend st...........	E. B. L. Warner st..	W. B. L. China al...	Ordinary macadam........	160.0	320.0	Paved by the Dept.
Howard st..........	S. C. L. West st.....	144 ft. southward....	Cobble paving............	144.0	176.0	Paved by the Dept.
Howard st..........	144 ft. S. of S. C. L. West st..........	210 ft. S. of N. C. L. Ostend st.........	Granite block on concrete..	400.0	1,773.3	Paved by the Dept.
Warner st. and Ostend st. (intersection)..		....	Granite block on concrete..	....	469.4	Paved by the Dept.
South side Ostend st.	E. B. L. Howard st.	E. B. L. Plum al....	Granite block on concrete..	185.0	513.0	Paved by the Dept.
Denver st...........	N. C. L. Ostend st..	S. C. L. West st.....	Cobble paving............	360.0	480.0	Paved by the Dept.
Dover st............	E. B. L. Sharp st....	W. B. L. Hanover st.	Vitrified block on concrete.	454.0	1,412.0	Paved by the Dept.
Caroline St. Pier...	W. C. L. Caroline st.	578 ft. westward....	Vitrified block on concrete.	578.0	1,031.0	Paved by the Dept.
Cathedral st.........	N. rail Centre st....	77 ft. S. of Mt. Vernon Pl...........	Granite block on concrete..	267.0	1,370.0	Paved by the Dept.
East side Eutaw Pl.	N. B. L. Lafayette ave.	S. B. L. Mosher st..	Asphalt block on concrete..	331.0	1,030.0	Paved by the Dept.
Gay st..............	N. C. L. Water st...	N. flag Lombard st..	Wood keys and granite blk.	298.0	1,256.0	Paved by the Dept.
Monroe st..........	S. C. L. Wilkens ave.	S. C. L. Eagle st....	Bit. concrete on cobble....	306.3	680.7	Paved by the Dept.
St. Paul st..........	N. B. L. Lexington st.	S. B. L. Saratoga st.	Wood keys and granite blk	402.0	1,471.0	Paved by the Dept.
Pratt st.............	Header west side President st.......	W. B. L. Central ave.	Granite block on concrete..	1,329.5	5,035.2	Paved by the Dept.
Potomac st.........	N. B. L. Baltimore st.	80 ft. northward....	Vitrified block on sand.....	....	163.8	Paved by the Dept.
Alley rear of 801-875	Ostend st..........	....	Vitrified block on concrete.	456.0	506.6	Paved by the Dept.
St. Elizabeth's Ct...	E. B. L. Courtland st.	W. B. L. Hargrove al.	Vitrified block on concrete.	91.0	179.4	Paved by the Dept.

*Under construction, not completed in 1913.

STREETS AND STREET INTERSECTIONS PAVED WITH NEW PAVEMENTS IN 1913.

(Streets in Annex.)

Street.	From.	To	Pavement.	Length in Feet.	Area, Square Yards	Guaranteed by Contractor
Calvert st.	S. C. L. Twentieth st	N. C. L. Twenty-fourth st.	Bit. concrete on cobble. . .	1,482.6	5,645.5	F. E. Schneider Paving Co.
Charles st.	N. B. Track University Parkway	73.3 ft. west of Charcoat road	Bituminous concrete.	2,412.0	10,221.0	Warner-Quinlan Paving Co.
*Charles st. and Thirty-fourth st. (Hopkins Oval)			Bituminous concrete.	. . . .	1,910.5	F. E. Schneider Paving Co.
Edmondson ave.	West end Gwynn's Falls Bridge	Western city line. .	Bituminous concrete.	4,322.0	8,975.5	Warner-Quinlan Paving Co.
			Cobble		5,152.0	Paved by the Dept.
Brunswick st.	South end Gwynn's Falls Bridge	Southern city line. . .	Sandstone block.	300.0	522.0	Paved by the Dept.
First alley north of Thirty-fourth st. . .	E. B. L. Elm ave. . .	360 ft. eastward.	Vitrified block on concrete.	360.0	400.0	Paved by the Dept.
First alley south of Gorsuch ave.	E. B. L. Tyler st. . . .	W. B. L. Kennedy ave.	Vitrified block on concrete.	128.0	288.0	Paved by the Dept.

*Under construction, not completed in 1913

STREETS AND STREET INTERSECTIONS PAVED WITH NEW PAVEMENTS IN 1913

(Done for Paving Commission.)

STREET	From	To	Pavement	Length in Feet.	Area, Square Yards.	Guaranteed by Contractor.
Saratoga st. and St.	Paul st. (intersection)		Granite block on concrete	....	313.7	Paved by the Dept.
Smallwood st. and	Fayette st. (intersection)		Vitrified block on concrete	....	403.1	Paved by the Dept.
*Hollingsworth st.	N. flag Pratt st.	S. flag Lombard st.	Granite block on concrete	374.0	877.0	Paved by the Dept.
*Grant st.	N. flag Pratt st.	S. B. L. Water st.	Granite block on concrete	591.0	961.0	Paved by the Dept.
*Ellicott st.	N. flag Pratt st.	S. B. L. Lombard st.	Granite block on concrete	369.0	734.0	Paved by the Dept
Old Ensor st.	W. B. L. Harford ave.	E. B. L. Ensor st.	Vitrified block on sand	67.0	177.3	Paved by the Dept.
Mason alley	N. B. L. Lafayette ave.	S. B. L. Mosher st.	Granite block on concrete	332.0	697.0	Paved by the Dept.
*Smith alley	E. of E. B. L. Frederick st.	165.9 ft. E. and 152.2 ft. S	Granite block on concrete	318.1	369.0	Paved by the Dept.
Rose st.	S. from S. C. L. Madison st.	98.5 ft. S.	Vitrified block on concrete	98.5	262.7	Paved by the Dept.
Jordan alley	N. B. L. Lafayette ave.	S. B. L. Mosher st.	Vitrified block on concrete	332.2	664.0	Paved by the Dept.
Madison ave. and M	cMechen st. (intersection)		Granite block on concrete	....	291.7	Paved by the Dept

*Split blocks were used on these streets.

THE FOLLOWING STREETS WERE PAVED UNDER SPECIAL ORDINANCES AND PERMITS ISSUED BY THE DEPARTMENT.

STREET.	From.	To.	Pavement.	Length in Feet.	Area, Square Yards.	Guaranteed by Contractor.
Fallsway, 1st section.	400 ft. N. Bath st...	S. B. L. Baltimore st.	Granite block on concrete..	2,600.0	15,583.0	D. M. Andrew Co.
*Fallsway, 2d section.	150 ft. S. of Andrew st.	N. B. L. Madison st.	Granite block on concrete..........		1,935.0	D. M. Andrew Co.
*Key Highway.......	S. B. L Lee st......	N. B. L. Montgomery st.	Granite block on concrete..........		5,334.0	Consol. Eng. Co.
Ostend st...........	E. B. L. Ridgely st..	W. B. L. Russell st.	Bituminous macadam......	335.0	1,228.3	Paved by the Dept.
Ostend st...........	E. B. L. Russell st..	W. B. L. Warner st.	Bituminous macadam......	332.0	1,217.3	Paved by the Dept.
Ostend st...........	E. B. L. Warner st..	W. B. L. China al.	Ordinary macadam........	160.0	320.0	Paved by the Dept.
Howard st..........	S. C. L. West st....	144 ft. southward....	Cobble	144.0	176.0	Paved by the Dept.
Howard st..........	144 ft. S. of S. C. L. West st..........	210 ft. S. of N. C. L. Ostend st.........	Granite block on concrete..	400.0	1,773.3	Paved by the Dept.
Warner st. and Ostend st. (intersection).		....	Granite block on concrete..........		469.4	Paved by the Dept.
South side Ostend st.	E. B. L. Howard st.	E. B. L. Plum al..	Granite block on concrete..	185.0	513.0	Paved by the Dept.
Denver st.........	N. C. L. Ostend st..	S. C. L. West st....	Cobble	360.0	480.0	Paved by the Dept.

*Under construction, not completed in 1913.

NEW MACADAM ROADWAYS WERE CONSTRUCTED AS GIVEN BELOW.

STREET.	From.	To.	Length, Feet.	Width. Feet.	Area. Square Yards.	Cost.	Remarks.
Ostend st......	Ridgely st.....	Russell st.....	331.21	39.6	1,217.3	....	Bituminous macadam.
Ostend st......	Russell st.....	Warner st.....	335.45	39.6	1,228.1	....	Bituminous macadam.
Ostend st......	Warner st.....	China al.. ...	160.0	20.3	361.0	....	Ordinary macadam.
Total cost..						$10,655 09	

Charged to regrading, repairing, underpinning walls on Howard, Stockholm and Eutaw streets, etc.

STATEMENT OF EXPENDITURES — SPECIAL ORDINANCES AND ALLOTMENTS.

Regrading, repaving and curbing Madison street, from east side of Luzerne avenue to west side of Grove alley (Ordinance No. 125, 1912)	$2,557 91
Regrading, repaving and curbing Garrett street, from west side of Park avenue to east side of Howard street (Ordinance No 133, 1912)	2,500 00

REGRADING, REPAVING, UNDERPINNING WALLS ON HOWARD STREET, STOCKHOLM STREET, EUTAW STREET AND NEIGHBORING STREETS.

(Incident to the construction of the Stockholm Street Viaduct and widening of Stockholm street.)

This appropriation, amounting to $25,000, was provided in the 1912 Ordinance of Estimates to cover costs to the city of work incidental to the construction of the Ostend Street Bridge by the Baltimore and Ohio Railroad Company under the terms of Ordinance No. 387, approved August 16, 1909.

This Division expended for the grading and paving of Ostend street, from the east building line of Ridgely street to the west building line of Russell street; from the east building line of Russell street to the west building line of Warner street; from the east building line of Warner street to the west building line of China alley; intersection of Warner and Ostend streets; Howard street, from the south curb line of West street to two hundred and ten feet south of the north curb line of Ostend street; the south side of Ostend street, from the east building line of Howard street to the east building line of Plum alley; Denver street, from the north curb line of Ostend street to the south curb line of West street, $20,789.91.

Other expenditures from this appropriation were made by the Bridge and Sewer Divisions of this Department.

STATEMENT OF EXPENDITURES.

Labor, as per pay roll	$17,207 61
Hauling	813 61
Stone, 256,172 yards	609 30
Cement	510 30
Sand, 488 yards	503 32
Gravel, 343,943 yards	367 86
Road binder, 3,347 gallons	301 23
Filler, 2,504 gallons	295 88
Coal, 11 tons; wood, ½ cord	56 75
Wire mesh	56 56
Filler gravel, 25 yards	32 50
Installing road crossing	23 31
Adjusting manhole	6 25
Canvas	2 00
Dry cells	1 50
Coal oil and gasoline	1 45
Gauge glasses	38
Nipples	10
	$20,789 91

AMOUNT OF REPAIR WORK DONE IN 1913.

The following table shows the amounts of work done during the year 1913 under all accounts, the same data for 1912 and the increase or decrease, as the case may be, is also shown.

CLASSIFICATION.	Unit.	1912.	1913.	Increase.	Decrease.
Asphalt block pavement repaired	Sq. Ft.	307,534	574,669	267,135	
Cinders hauled	Ct. Lds.	5.912	4,198		1,714
Cobble base on roads	Sq. Ft.	2,584	21,035	18.451	
Cobble pavement (new)	Sq. Ft.		47,632	47.632	
Cobble pavement repaired	Sq. Ft.	968.502	1,006.483	37.981	
Cobble rebuts paved	Sq. Ft.	52,262	37,482		14,780
Concrete curb constructed	Lin. Ft.	5,156	7.605	2.449	
Concrete curb reset	Lin. Ft.		334	334	
Concrete gutter constructed at yard and laid	Lin. Ft.	3,654			3.654
Concrete gutter laid (old)	Lin. Ft.		4,063	4.063	
Concrete gutter constructed on work	Lin. Ft.	730	388		342
Concrete sidewalk	Sq. Ft.	2,438	190		2,248
Ditches cleaned on roads and streets	Lin. Ft.	44,365	58,463	14.098	
Flags reset	Sq. Ft.	66,635	31.345		25,290
Grading	Cu. Yds.	2,027	885		1,142
Granite block pavement repaired	Sq. Ft.	2,122,382	731.184		1.391,198
Granite curb (new) set, 4½-inch	Lin. Ft.	101			101
Granite curb (old) set, 4½-inch	Lin. Ft.	2,837	1,247		1.590
Granite curb reset, 4½, 5 and 6-inch	Lin. Ft.	40.862	54.434	13.572	
Granite gutter stone (old) laid	Lin. Ft.	6,882	1,290		5.592
Granite gutter stone relaid	Lin. Ft.	105,718	48.172		57.546
Gutter plates (iron) reset	Sq. Ft.	307	1,056	749	
Gutter plates (stone) reset	Sq. Ft.		108	108	
Macadam (ordinary) repaired	Sq. Yds.	49.586	28,092		21.494
Macadam (bituminous) repaired	Sq. Yds.	333	1.475	1,142	
Macadam flushed	Sq. Yds.	2,955			2,955
Roads oiled	Sq. Yds.	145,802	173,528	27,726	

Sheet asphalt repairs (contract)	Sq. Yds.	35,300	39,816	4,516	....
Sheet asphalt repairs (municipal plant)	Sq. Yds.	....	1,766	1,766	....
Repairs to bitulithic streets (contract)	Sq. Yds.	....	663	663	....
Repairs to bitulithic streets (municipal plant)	Sq. Yds.	....	304	304	....
Slag block repaved	Sq. Ft.	....	1,178	1,178	....
Refuse hauled	Ct. Lds.	31,881	37,008	5,127	....
Drain pipe laid	Lin. Ft.	82	55	....	27
Vitrified block gutters (new) laid, where other material existed	Sq. Yds.	248	151	....	97
Vitrified block pavement repaired	Sq. Ft.	92,531	107,064	14,533	....
Vitrified block footways repaired	Sq. Ft.	3,086	1,698	....	1,388
Vitrified block and wood block pavements flushed	Sq. Yds.	3,997	201	....	3,796
Wood block pavement repaired	Sq. Ft.	....	17,129	17,129	....

COMPARATIVE UNIT PRICES OF LABOR AND MATERIAL FOR DIFFERENT YEARS.

	1911.	1912.	1913
Asphalt block. 4x4x12 and 3x5x12	$0.06½	$0.06½	$0.06½
Asphalt block, 4x5x12	.07	.07	.07
Vitrified block, per 1,000, f.o.b. Baltimore, Md.	19.40	19.40	20.45
Vitrified block, per 1,000, delivered at city yard.	21.40	21.60	22.95
Paving sand, per cubic yard	.88	.87	.98
Screened sand, per cubic yard	1.02	1.02	1.04
Laying cobble stone, per square foot	.04	.04	.045
Laying granite block on sand base, per square foot	.045	.05	.05
Laying granite block on concrete base, including heating and pouring filler and gravel, per square yard	.45	.48	*.55
Resetting flag stones, per square foot	.11	.11	.11
Redressing flag stones, per square foot	.06	.06	.06
Resetting gutter stone, per lineal foot	.04	.04	.045
Resetting 4½-inch curb, per lineal foot	.14	.14	.14
Dressing 4½-inch curb, per lineal foot	.14	.14	.25
Resurfacing ordinary macadam	.02	.025	.025
Repairing with asphalt block on sand base, per square foot	.043	.043	.041
Paving new asphalt block on concrete base, including grading, per square foot	.12	.12	†.07
Paving new asphalt block on concrete base, grading not included, per square foot	.044	.044	.040
Repairing old vitrified block on sand base, per square foot	.053	.055.	055
Paving new vitrified block on concrete base, grading not included, per square foot	.050	.055	.055
Six-inch concrete base (mixed with machine), not including grading, per square foot	.018	.018	.015
Grouting new vitrified block, per square foot.	.003	.003	.003
Laying new vitrified block on sand base, per square foot	.028	.03	.027

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*About half of this area laid was between car tracks.

†The base here was sand and was used on the work The cost of grading was thus materially reduced.

TOTAL LABOR PERFORMED IN 1913, COMPARED WITH THAT OF 1912.

	Days			
	1912.	1913.	Inc.	Dec.
Foremen	4,379	4,467	88	......
Assistant foremen	412	49	......	363
Cobble stone pavers	3,282	3,837	555	......
Belgian, asphalt and vitrified block pavers	8,321	5,602	......	2,719
Rammers	7,192	5,867	......	1,325
Carters	10,861	9,468	......	393
Laborers	47,807	54,929	7,122	......
Watchmen	1,769	1,406	......	363
Inspectors	766	1,099	333	......
Blacksmith	297	316	19	......
Blacksmith's helper	297	316	19	......
Stonecutters	672	1,062	390	......
Carpenters	153	142	......	11
Teams and drivers (city wagons)	537	687	150	......
Teams, drivers and wagons (hired)	577	2,061	1,484	......
Engineers (road rollers)	226	916	690	......
Engineers (concrete mixers)	66	388	322	......
Engineers (oil wagon)	52	107	55	......
Finishers (cement)	212	188	......	24
Road rollers (hired)	61	58	......	3
Boiler (hired)	12	......	......	12
Sweeper (hired)	9	......	......	9
Hire of horse and cart	350	351	1	......
Scarifier (hired)	......	52	52	......

STATEMENT OF EXPENDITURES—REPAIRS OF ROADS, STREETS, ETC.

Labor, as per pay rolls	$131,429	18
Asphalt blocks (4x5, 412,926; 3x5, 143,275; old, 1,755)	38,329	10
Belgian blocks, 176,563	7,761	15
Vitrified blocks, 132,701	2,714	43
Crushed stone, dust and granolithic (gabbro), 5,334.6 cubic yards	11,387	83
Crushed stone, dust and granolithic (gneiss), 24.34 cubic yards	38	20
Cement	2,570	84

Blacksmithing and new vehicles	$62 65
Paving sand, 7,605 cubic yards	7,222 00
Screened sand, 596.64 cubic yards	857 58
Gravel, 1,523.26 cubic yards	1,988 03
Hauling	8,018 69
Sheet asphalt repairs	40,316 97
Stone crushing	10,509 06
Lumber	3,543 83
Repairs to improved pavements under guarantee	734 68
Pipe	100 82
Care fare	1,089 05
Automobile supplies, storage, etc	788 33
Freight, express and demurrage charges	3,874 64
Tools, hardware, etc	1,302 11
Filler (Barrett), 461,170 pounds	3,226 00
Coal oil and gasoline	581 00
Coal and wood	448 13
Bituminous concrete laid	17,659 08
Curb iron bars, 2,000 feet	308 88
Old material from Paving Commission	1,556 43
Paving blocks, 8,455	101 46
Paints, oils and brushes	402 27
Repairs to rattler motor, city yard	355 30
Repairs to engine, concrete mixer	292 81
Inspection, sheet asphalt and bituminous concrete	1,361 72
Concrete base laid (Cathedral street) 233.7 square yards	394 08
Storage of cement	97 62
Canvas, 2,515 square feet	94 25
White oak keys, 84,907	3,935 29
Repairing sheet asphalt cuts	37 37
New water supply	47 80
Wire mesh	132 54
Cutting granite blocks	93 96
Rubber belt, 50 feet	14 00
Dry cell batteries, 40	13 25
Borax, 75 pounds	8 50
Drawing board	29 00
Tapelines, 13	26 33
Salt	3 60
Straw	1 34
Rebate for grading Grantley street	390 66
Transit	156 80

Insurance on road roller	$30 00
Water hose, 475 feet	73 25
Filing cabinet	48 00
Glass-stoppered cylinders, two	3 80
Frogs, 1,195	56 35
Cobble stone, 154 loads	154 00
Surveys and plats	214 00
Motorcycles, accessories, etc.	596 62
Office supplies	22 75
Inspection of improved pavements under guarantee	1,227 00
Carpentry work in office	32 15
Manilla rope, 600 feet	24 36
Iron and steel	74 08
Adding machine paper, 25 rolls	1 50
Blue printing	3 03
Electric fans, two	30 50
Thermometers, 18	29 70
Inspection, granite blocks	122 55
Spikes for road roller, 56	70 00
Ventilator	12 00
Keil, five dozen sticks	6 00
Carbon paper, 200 sheets	1 96
Gum rollers, six	10 29
Licenses for motorcycle	3 10
Grading sidewalk (Brentwood avenue)	73 81
Postage stamps	60 00
Expense to Good Roads Convention	36 60
Expenses of trip to Philadelphia and New York	89 80
Badges	53 50
Office furniture	9 00
Dictaphone	88 20
Bond for Mr. Boteler	15 00
Electrical work at garage	95 75
Lunch	4 00
Telegraphing	2 08
Printing	7 40
Railroad fare	26 10
Entertaining City Engineer from Niagara Falls	3 50
Repairs to typewriter	1 50
Testing material	24 00
Repairs to standpipe	83
Oil tanks, two 60-gallon	12 00

Replacing cable	$9 57
Medical attention	4 75
Paving Pratt street	7,775 45
Mold board	3 19
Miscellaneous incidentals	67 17
Adjusting manholes	12 92
Taking out concrete (force account)	21 77
Repairs to car	3 30
Equipping mixer with batteries	364 65
Repairs to tar boiler	60 07
Developing and printing photographs	38 05
Hire of road roller	581 90
Repairing saws	1 50
Damage to wagon of Mrs. A. Albrecht	3 00
Lime	1 00
Hire of scarifier	52 00
Iron pot, 35 gallons	4 90
Repairs to broken water supply	6 08
Repairs to road roller	65 27
Heavy steel cloth	8 04
Tracing linen and profile cloth	52 15
Martin arch brick, 2,500	23 75
Cement footways laid by contract	86 69
Total	$319,106 27

SUMMARY—COST OF STREET REPAIRS.

Class of Work.	Square Yards Repaired.	Expended.	Average Cost per Square Yard.
Repairs, asphalt block, sand base	43,145.0	$45,223 01	$1 048
Repairs, asphalt block, concrete base	13,185.0	18,726 00	1 4202
Repairs, vitrified block gutters on asphalt block pavements	5.5	43 50	2 50
Repairs, vitrified block pavement	5,079.0	8,216 57	1 6177
Repairs, vitrified block gutters on sheet asphalt pavement	152.0	425 60	2 80
Renewals, asphalt block on concrete base, formerly on sand	1,025.0	2,522 27	2 4607
Macadam road repairs	25,987.0	15,167 32	5836
Unpaved road repairs	....	2,411 20	....
Granite block pavements repaired, sand base	41 217.0	25,139 07	6099
Granite block pavements repaired, concrete base	708.0	878 02	1 24
Granite block pavements repaired, sand base, bituminous filler, new block	172.0	421 30	2 449
Granite block pavements repaired, sand base, bituminous filler, old block	1,364.0	1.654 01	1 212
Repairs to Alcott's wood wedge block pavement	124.0	242 40	1 9549

PAVING PRIVATE ALLEYS.

Assessments were made for paving private alleys to abate nuisances, under orders from the Health Department, based on Ordinance No. 13, approved October 23, 1905, as follows:

Alley in rear of north side of 700 block Thirty-fourth street, between east building line of Elm avenue to west building line of first alley west of Chestnut avenue. Assessment completed November 9, 1912. Amount, $1,000.

Alley south of Gorsuch avenue, from east building line of Tyler street to west building line of Kennedy avenue. Assessment completed April 15, 1913. Amount, $800.16.

Alley west of Ostend street, from alley north of Scott street to Wicomico street. Assessment completed August 13, 1913. Amount, $2,460.94.

Hudson alley, from Oliver street 110 feet south, and alley in rear of No. 47 to 65 West Oliver street. Assessment completed October 11, 1913. Amount, $1,337.52.

STATEMENT OF EXPENDITURES.

Labor, as per pay roll	$2,644 42
Refunds	452 26
Vitrified block, 52,000	1,024 43
Paving sand, 272½ cubic yards	269 70
Gravel, 126.4 cubic yards	181 74
Screened sand, 13½ cubic yards	15 53
Cement	248 02
Hauling	111 38
Blue prints	08
Advertising	165 01
Lumber	6 27
Demurrage	4 00
Freight	94 96
Tools	90
Pipe, 588 feet	155 88
Terra-cotta "Y" branches, five	8 40
Terra-cotta bends, five	2 52
"E" inlet, one	17 50
Total	$5,403 00

VITRIFIED BLOCK AND FLAG STONE FOOTWAY CROSSINGS LAID.

	No.	Sq. Yds.
New vitrified block crossings on concrete base	1	13.3
New vitrified block crossings on sand base	4	62.0
Old flag stone crossings on sand base	8	123.5
Laying concrete footway on Harford road (Montebello property)	1	18.0
	14	216.8

Expenses.

Labor	$392 09
Material	232 03
Charge to: Footway Crossings	$624 12

STATEMENT OF EXPENDITURES—PAVING AND REPAIRING CROSS STREETS AND PAVING IN FRONT OF CITY PROPERTY.

Labor, as per pay rolls	$21,499 07
Bituminous concrete on Charles street	9,198 94
Cement footways laid by contract	4,965 62
Asphalt blocks (4x5, 21,200; 3x5 18,550)	2,603 35
Crushed stone, 644,063 cubic yards	1,422 47
Barrett filler, 120,445 pounds	846 62
Paving sand, 857.46 cubic yards	826 22
Hauling	603 33
Stone crushing	541 21
Concrete protection to members of Calvert Street Bridge	465 95
Lumber, 800 lineal feet of Virginia pine	370 54
Sheet asphalt repairs	354 38
Vitrified blocks, 9,825	206 65
Belgian blocks, 3,000	194 04
Freight	108 40
Tools, hardware, etc	83 90
Paving brick, No. 2, 6,254	75 05
Tarvia, "A," 10 barrels	60 00
Pipe	54 14

Rolling and binding stone in Moses alley	$50 00
Gravel, 40.1 cubic yards	46 00
Screened sand, 38.65 cubic yards	40 38
Coal oil and gasoline	32 25
Adjusting manholes	32 10
Metallic tapes, one dozen	27 30
Repairs to motorcycle	22 95
Cement	22 97
Advertising	13 50
Plats and surveys	15 00
Developing and printing photographs	12 80
Paving brick, 1,000	12 00
Altering railing	12 00
George's Creek coal, two tons	8 75
Terra-cotta pipe, 27 lineal feet	5 40
Repairs to concrete mixer	3 35
Dry cell batteries, one dozen	3 00
Tape repaired	1 20
Iron	84
Blacksmithing and repairs to vehicles	60
Vermilion, one pot	50
Blue printing	35
Total	$44,843 12

SHEET ASPHALT PAVEMENTS REPAIRED IN 1913.

Streets.	From.	To.	Sheet Asphalt, Sq. Yds.	Cost, Ordinary Repairs.	Cost, Private Paving.
Baltimore street	Broadway	Kenwood avenue	4,142.85	$3,447 79	$1,534 04
Baltimore street	Kenwood avenue	East avenue	838.19	968 95	123 81
Broadway	Fleet street	Preston street	12,705.25	10,280 69	4,903 89
Broadway	Preston street	North avenue	3,632.73	4,300 22	246 58
Callow avenue	Whitelock street	Park Driveway	53.63	50 17	15 97
Calvert street	Read street	Mt. Royal avenue	2,909.87	3,263 36	72 65
Calvert Street Bridge	....	....	287.42	338 72	....
Camden street	Hanover street	Howard street	689.28	725 66	54 23
Chase street	Broadway	Calvert street	4,850.77	5,105 76	558 82
Ensor street	Lamont avenue	North avenue	134.70	32 32	119 89
Fayette street	Guilford avenue	Calvert street	360.60	214 07	293 92
Front street	Baltimore street	Gay street	792.59	910 79	....
Fulton avenue	Presstman street	Pennsylvania avenue	1,921.24	2,085 00	119 94
Gough street	Patterson Park ave	Broadway	4.67	5 28	....
Hollins street	Poppleton street	Carrollton avenue	385.13	467 77	....
Konig street	Brookfield avenue	Linden avenue	28.56	....	48 02
Lexington street	Guilford avenue	Calvert street	55.00	66 49	....
Lexington street	Harrison street	Holliday street	1,283.64	962 17	721 08
Repairs around City Hall	....	....	646.06	475 81	303 40
Repairs around Lafayette Market	....	....	192.38	217 39	....
Repairs around Richmond Market	....	....	408.54	433 70	....
Mt. Royal avenue	Guilford avenue	Cathedral street	833.55	164 77	1.120 98
Amount carried forward	....	....	....	$34,516 94	$10,237 22

SHEET ASPHALT PAVEMENTS REPAIRED IN 1913—*Continued.*

STREETS.	From.	To.	Sheet Asphalt, Sq. Yds.	Cost, Ordinary Repairs.	Cost, Private Paving.
Amount brought forward				$34,516 94	$10,237 22
North avenue	Druid Hill avenue	Payson street	19.80	20 76	8 64
Mulberry street	**Charles street**	**Howard street**	220.44	119 19	177 02
Oliver street	Caroline street	Central avenue	45.13	109 64	
St. Paul street	**North avenue**	**Thirty-first street**	1,519.44	1,541 80	185 96
St. Paul Street Bridge			719.41	802 42	
Sharp street	**Camden street**	**Pratt street**	135.18	131 11	21 14
			29,816.05	$37,241 86	$10,629 98
Calvert street	Lanvale street	North avenue	*1,221.10	409 86	
Force account works				21 77	
				$37,673 49	37,673 49
Total amount expended in 1913 for sheet asphalt repairs					$48,303 47

*New vitrified block gutters.

SHEET ASPHALT SUMMARY.

	Sq. Yds.
Ordinary repairs on old concrete base	32,678.74
Ordinary repairs on new concrete base	677.59
Private paving and inspection on old concrete base	3,453.32
Private paving and inspection on new concrete base	3,006.40
	39,816.05

Cost of ordinary repairs	$37,263 63
Cost of inspection at plant	1,447 72
Cost of inspection of ordinary repairs on street	758 00
Cost of new vitrified block gutter paved on sheet asphalt streets	409 86
Amount expended on maintenance of sheet asphalt pavements, 1913	$39,879 21
Cost of inspection of private paving on streets	$262 50

MAINTENANCE TABLE, 1913.

STREETS UNDER GUARANTEE ARE NOT INCLUDED.

KIND OF PAVING.	Total Area, Square Yards.	Total Area Repaved, Square Yards.	Amount Expended.	Cost per Square Yard, Total Area.	Per Cent. of Total Area Repaved.	Cost per Square Yard for Area Repaved.
Alcott's improved paving........	6,374	127	$251 84	$0.0395	1.99	$1.9829
Amiesite	4,600	265	422 27	0.0917	5.76	1.5934
Asphalt block....................	432,712	57,360	66,471 28	0.1536	13.25	1.1588
Bitulithic	71,854	....	120 89	0.0016	....	....
Bituminous concrete..............	4,856	....	45 22	0.0093	....	....
Cement surface...................	14,045	....	....	....	....	....
Cobble-stone	4,810,979	52,449	31,080 01	0.0064	1.09	0.5925
Granite block....................	812,634	42,563	28,731 56	0.0353	5.23	0.6750
Macadam (bituminous)..........	53,795	....	....	....	....	....
Macadam (ordinary)............	921,498	25,987	15,157 32	0.0164	2.82	0.5832
Medina block.....................	1,517	....	....	....	....	....
Sheet asphalt....................	307,791	33,357	39,879 21	0.1295	10.83	1.1955
Unpaved	813,882	....	2,411 20	0.0029	....	....
Vitrified block..................	441,647	5,323	7,604 76	0.0172	1.21	1.4286
Wood block.......................	34,733	579	1,294 94	0.0372	1.67	2.2365
Total....................	....	....	$193,470 50	....	....	....

PRIVATE PAVING AND INSPECTION.

The work under this heading includes the repaving over trenches opened by all city departments, public service corporations and plumbers on all streets not under a contractor's guarantee. Where a contractor fails to comply with his guarantee, when notified by the City Engineer to repave a cut, this Department makes the repairs and charges the responsible party direct. This account also includes repairs, other than cuts to pavements under a contractor's guarantee, where the contractor has failed to comply with a repair notice from the City Engineer; the cost thereof being charged to the contractor direct. It also includes all work for public service corporations and city departments, when requested by them, and a great amount of special work for private corporations and individuals, upon their application, in writing, to this Department.

The work done under this account for the year 1913 amounts to $151,787.46. A total of 8,070 jobs were handled during the year, distributed as follows: 5,611 for the Water Department; 1,245 for the Electrical Commission; 248 for the Sewerage Commission; 327 for the Chesapeake and Potomac Telephone Company; 639 for other city departments, corporations and private individuals. Cinders and refuse hauled, 5,335 loads.

In addition to the above, the force employed to carry on this work made repairs to streets charged against appropriations of this Department, classified as follows: Cobble stone repairs, 50,705 square feet; gutter relaid, 4,643 lineal feet; curb reset, ,1540 lineal feet; flag stone reset, 1,701 square feet; vitrified block on sand, 2,397 square feet; vitrified block on concrete base, 1,668 square feet; vitrified block gutter, 264 lineal feet; belgian block on sand, 30,894 square feet; belgian block on concrete base, 41 square feet; wood block on concrete base, 2,307 square feet; asphalt block on sand, 4,547 square feet; asphalt block on concrete, 30 square feet; cinders and refuse hauled, 1,239 loads. Cost: Labor, $5,195.49; material, $1,243.35.

A very large part of the above work, charged to the appropriation of this Department, was in connection with the repairs over trenches and cuts where it was not practical to confine the repaving to the areas allowed by the department making the cut.

The following table shows the amount of work done under new paving rates:

Class.	Square Yards.	Amount Charged.
Sheet asphalt	40.23	$241 38
Belgian block	202.51	1,241 90
Vitrified block	137.50	818 23
Asphalt block	388.37	1,832 71
Wood block	29.77	159 96
Macadam	558.01	1,623 58
Total		$5,917 76

Amount of bills rendered to Water Department, Electrical Commission and Sewerage Commission; actual cost plus 10 per cent.:

Water Department	$17,758 45
Electrical Commission	10,118 07
Sewerage Commission	34,299 80

Areas are included in the following summary of private paving and inspection work:

Class.	Square Yards.	Expended.	Avg. Cost per Sq. Yd.
Cobble repaved	53,139	$18,912 00	$0 36
Belgian block on sand	11,144	5,411 63	49
Belgian block on concrete	1,069	1,713 08	1 60

Vitrified block on sand	1,513	$1,338 57	$0 89
Vitrified block on concrete	3,616	6,928 50	1 92
Vitrified block on concrete, granolithic topping	201	757 90	3 76
Asphalt block on sand	3,562	3,170 68	92
Asphalt block on concrete	3,212	6,583 59	2 05
Wood block on concrete	913	2,421 42	2 65
Sheet asphalt	4,950	8,368 95	*1 69
Concrete curb (lineal feet)	26	16 79	64
Macadam	91	175 76	1 93
Bitulithic	316	382 79	1 31
Belgian block, wood keys	4	8 41	2 10
Bituminous concrete	119	145 28	1 22
Slag block on concrete	9	11 41	1 27
Cement pavement	140	177 08	1 27

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*Inspection not included.

Work done for Paving Commission:

	Sq. Yds.
Belgian block on concrete	4,243.4
Vitrified block on sand	843.1
Vitrified block on concrete	1,329.8

Total cost (plus 10 per cent.)	$20,088 84
For furnishing gasoline, hanging lanterns, cleaning streets, miscellaneous small jobs, etc	1,545 60

Miscellaneous; actual cost plus 10 per cent.:

Class.	Area.
Cobble repaved (square feet)	48,527
Gutter relaid (lineal feet)	3,147
Belgian block on sand base (square feet)	152,592
Belgian block on concrete base (square feet)	15,221
Curb reset (lineal feet)	466
Flag stone reset (lineal feet)	3,526
Asphalt block on sand base (square feet)	3,300
Asphalt block on concrete base (square feet)	2,569
Vitrified block on sand base (square feet)	5,264
Vitrified block on concrete base (square feet)	2,576

Class.	Area.
Macadam (square feet)	4,825
Wood block on concrete base (square feet)	3,624
Concrete curb (lineal feet)	1,117
Brick sidewalk (square feet)	343
Grading (yards)	1,755
Bituminous concrete (square feet)	2,504
Concrete curb reset (lineal feet)	58
Medina block on concrete base (square feet)	65
Cinders and refuse hauled (loads)	5,335
Wood keys (square feet)	65
Brick footways (square feet)	209
Sheet asphalt (square yards)	1,510
Cost of above, including labor, material and percentage	$82,265.16

STATEMENT OF EXPENDITURES.

Private Paving and Inspection.

Labor, as per payrolls	$80,936 49
Vitrified blocks, 386,589 blocks	7,025 32
Belgian blocks, 35,000 blocks	1,102 56
Asphalt blocks, 25,475, 3x5; 8,050, 4x5 blocks	2,232 37
Cement	5,832 17
Paving sand, 7,020.95 cubic yards	6,517 56
Screened sand, 220.31 cubic yards	205 28
Gravel, 3,794.9 cubic yards	4,997 54
Crushed stone (gabbro), 194,247 cubic yards	422 34
Crushed stone (gneiss), 19.71 cubic yards	25 63
Lumber	81 89
Hauling	1,794 24
Sheet asphalt repairs	8,973 46
Wood blocks, 73,227 blocks	2,607 04
Filler, 75,336 pounds	540 25
Freight, express and demurrage charges	4,436 70
Cutting granite blocks, 111,460 blocks	2,253 41
Bituminous concrete laid, 1,910.5 square yards	1,719 45
Coal oil and gasoline	298 64
Rebates and refunds	293 54
Concrete base laid	446 89
Sheet asphalt (force account)	128 53
Repairs to bituminous cuts	595 11
Curb iron bars, 1,100 feet	175 17

Coal and wood	$55 43
Wire mesh	70 70
Inspection of sheet asphalt and bituminous concrete	86 00
Waterproofing compound, 80 pounds	10 19
Piling blocks	11 55
Cylinder broom	13 00
Liquid asphalt (Aztec), 275 gallons	11 00
Tools and hardware	2 03
Salt, four sacks	4 50
Setting concrete curb, 10 lineal feet	6 00
Iron and steel	9 60
Repairs to concrete mixer	1 05
Blue printing	18
Total	$133,922 82
Credit	881 13
	$133,041 69

CREDIT MATERIAL PAID FOR IN 1913 AND ON HAND DECEMBER 30, 1913.

Baltimore blocks, 3-inch, 4,666 blocks	$133 56
Clymer blocks, 763 blocks	21 89
Metropolitan blocks, 10,350 blocks	305 12
Asphalt blocks, 4x4, 95 blocks	6 18
Asphalt blocks, 4x5, 606 blocks	42 42
Wood blocks, 3x3½, 3,602 blocks	127 51
Wood blocks, 4x4, 1,814 blocks	95 05
Metropolitan, Hillside blocks, 3,821 blocks	120 29
Mack blocks, 1,121 blocks	29 11
	$881 13

PROPERTY AND STORAGE YARDS.

Rogers Avenue Yard.

The force employed at this yard consists of the following: One superintendent, one assistant superintendent, one clerk, one blacksmith, one blacksmith's helper, one emergency wagon and horse and one horse and cart.

An average of nine laborers were carried on the pay roll.

The number of emergency jobs, due to reports from Police Department and others, attended to from this yard was 861.

Lights were placed and maintained on 261 emergency calls and turned over to other foremen, contractors and departments.

There were 11,199 loads of materials and tools received at this yard and 11,116 loads of materials and tools distributed from this yard during the year 1913.

This yard furnished the Engineer's Department rodmen on 132 days. Men were sent to receive and tally vitrified block, belgian block and wood block on 171 days.

Foremen were furnished men for emergency work on 460 days and carts and horses on 70 days.

The laborers repaired and repainted steam rollers 1, 2 and 3; street sweeper; tar boilers 1, 2, and 3; concrete mixers 1, 2 and 3; two-horse wagons 1, 2 and 3; drays 1 and 2; water wagons 1 and 2; oil wagon; tool boxes; grout boxes and small tools of every description.

After deducting men furnished for outside work, the number of laborers actually working in this yard during the year 1913 averaged five per day.

In order to provide increased facilities for testing brick, the old frame rattler shed was demolished and a new concrete building erected. Foundations, walls, floor, roof and partitions are all of concrete. Size of building is 24 feet by 24 feet, height nine feet, containing two rooms separated by a six-inch partition. Building is covered with a six-inch concrete roof. Entire building equipped with electricity. For carrying off dust, a motor-driven fan was provided and connected with the Low Street Sewer. Concrete bases for three rattlers and three motors were also erected. Cost of structure was $1,096.13. The building is equipped with two Hetherington & Berner rattlers, two Wagner Electric Manufacturing Company's 7½-horsepower motors for rattlers, one Wagner Electric Manufacturing Company's 2-horsepower motor for fan, one fan or blower for removing dust. One thousand two hundred brick tests were made in this new building during the year 1913.

A frame shed for accommodating the steam rollers, mixers and large rolling stock was erected during the year 1913. Size, 75 feet by 22 feet and 16 feet high. Cost, $236.99.

Statement of Expenditures.

MAINTENANCE OF PROPERTY YARD.

Labor, as per pay rolls	$2,335 00
Lumber	169 72
Camera and film pack	101 60
Hard coal, seven tons	52 15
Roofing, nails and paper	20 35
Stocks and dies	25 75
Ice	13 70
Fire extinguishers, three	23 81
Night soil removed, four and one-half loads	11 25
Stove pipe and parts	10 80
Cutting gas pipe	2 00
Galvanized measures and funnel	7 55
Carbon paper, 200 sheets	2 00
Rent for platform	1 00
Gas consumed, 7,800 cubic feet	6 01
	$2,782 69

Mt. Royal Lot.

Old material to the value of $5,273.61 was hauled on this lot during the year.

Statement of Expenditures.

Day watchman in charge		$636 87
Labor (piling and receiving stone, dressing curb, flag, etc.)		1,698 12
Hauling material to lot		608 39
		$2,943 38
Charge:		
Repairs of roads, streets, etc	$2,298 10	
Paving and repairing cross streets	155 00	
Private paving and inspection	290 28	
		2,943 38

Ashland Avenue Lot.

Old material to the value of $5,614.28 was handled during the year.

STATEMENT OF EXPENDITURES.

Watchman in charge		$622 00
Labor (receiving and piling material, dressing curb, etc.)		1,565 60
Hauling material to lot		650 38
		$2,837 98
Charge:		
Repair of roads, streets, etc	$2,407 92	
Paving and repairing cross streets	293 81	
Private paving and inspection	136 25	
		2,837 98

OILING.

STATEMENT OF EXPENDITURES—LAYING DUST AND PRESERVING MACADAM ROADS.

Labor, as per pay rolls	$4,860 81
Crushed stone and granolithic, 603 882 cubic yards	1,429 60
Demurrage on cars of oil	73 00
George's Creek coal, 18.5 tons; two cords of wood	105 92
Freight on cars of oil	85 70
Dry cell batteries, one dozen	3 00
Fittings for roller	6 45
Gasoline, 89 gallons	13 85
Kent oil heater	125 00
Pipe	6 13
Motorcycle	265 00
Repairs to sweeper	2 00
Repairs to oil wagon	37 50
Cylinder broom for sweeper	13 00
Paving sand, 12,525 cubic yards	1,287 03
Screened sand, eight cubic yards	9 20
Hoes, half dozen	5 00
Miscellaneous	11 59
Nipples on oil wagon	6 00

Tarco heating kettles, two	$200 00
Texaco oil, 12,027 gallons	902 03
Aztec liquid asphalt, 30,785 gallons	1,231 40
Fairfield, 6,000 gallons	435 00
Trinidad liquid asphalt, "A," 8,030 gallons	449 68
Ugite, 495 gallons	54 50
Van Duzen mixer	175 00
	$11,793 39

STREETS OILED, 1913.

Street.	From.	To.	Length.	Width.	Sq.Yds.
Charles street	Abell's gate	City line	608	20	1,351
University Parkway	Charles street	**St. Paul street**	550	30	1,833
Merrymans lane	**St. Paul street**	York road	2,437	18	4,800
St Paul street	Thirty-first street	Thirty-second street	729	26	2,106
Montpelier street	Montebello avenue	Ellerslie avenue	1,065	23	2,678
Old York road	**York road**	Gorsuch avenue	931	18	1,862
Montebello avenue	**Gorsuch avenue**	Thirtieth street	1,100	21	2,800
Montebello avenue	Exeter Hall avenue	Cokesbury avenue	2,183	17.5	4,122
Homestead avenue	Montebello avenue	Frisby street	1,795	21.5	4,128
Twenty-eighth street	**York road**	**Reese street**	825	20	1,966
Twenty-seventh street	**York road**	Frisby street	485	24	1,293
Woodberry avenue	**Parkdale avenue**	Railroad avenue	1,078	18.5	2,385
Frisby street	**Twenty-seventh street**	**Twenty-eighth street**	420	24	1,120
Old Pimlico road	**Park Heights avenue**	Kate avenue	2,629	12.5	3,454
Brooks lane	**Madison avenue**	Morris alley	156	24	416
Linden avenue	Whitelock street	Brooks' Estate	307	22.5	917
Thirtieth street	York road	Montebello avenue	2,281	16.5	4,027
Erdman avenue	**Harford road**	**Belair road**	3,095	21	11,407
Cedar avenue	Thirty-third street	**Park gate**	1,743	32	6,197
Hillen road	Harford road	City line	3,969	16	7,133
Taylor street	Twenty-second street	Cromwell street	241	15	402
Kate avenue	**Garrison avenue**	Park Heights avenue	4,298	20	9,551
Fernhill avenue	**Garrison avenue**	City line	1,723	24	4,595
Granada avenue	Maine avenue	Liberty Heights avenue	1,126	24	3,117
Oakfield avenue	Maine avenue	Forest Park avenue	1,826	24	4,871

Maine avenue	Garrison avenue	City line	1,490	24	3,976
Springdale avenue	Granada avenue	Oakfield avenue	625	24	1,666
Windsor Mill road	Garrison avenue	Western city line	4,282	16	7,612
Thirteenth street	Clifton avenue	**North avenue**	525	25	1,458
Walbrook avenue	**Ninth street**	Thirteenth street	1,711	25	4,753
Tenth street	**North avenue**	Windsor avenue	1,118	25	3,106
Clifton avenue	**Eighth street**	Hilton street	1,228	25	3,411
Chelsea Terrace	Clifton avenue	Windsor Mill road	700	25	1,944
Franklin street	Payson street	P., B. & W. R. R.	1,385	26	3,401
Franklin street	Payson street	Calverton road	2,595	17.5	5,047
Franklin road	Edmondson avenue	W. M. R. R.	2,604	14.5	4,195
Roslyn avenue	Windsor Mill road	Duvall avenue	2,792	24.5	7,589
Piedmont avenue	Garrison avenue	Tenth street	1,843	20	4,095
Strickland street	Caton street	Longwood avenue	1,147	24	3,060
Old Frederick road	Frederick road	Western city limits	4,803	15	8,005
Augusta avenue	Frederick road	Walrad avenue	1,060	25	2,945
Cemetery lane	776 feet west of Baltimore street		776	15.5	1,325
Garrison lane	Baltimore street	P., B. & W. R. R.	454	16	807
Calverton road	Edmondson avenue	1,305 feet south	1,305	16	2,320
Edmondson avenue	Gwynn's Falls Bridge	**Western city line**	5,178	5	2,877
Park Heights avenue	**Park gate**	City line	6,000	32	21,333
Total			81,221		183,456

Total yardage, 1913, 183,456; total yardage, 1912, 145,802; increase, 1913, 37,654. Total length (lineal feet), 1913, 91,221; total length (lineal feet), 1912, 59,229.2; increase, 1913, 21,991.8. Mileage, 1913, 15.38; mileage, 1912, 11.22; increase, 1913, 4.16.

University Parkway, from the east curb line of Charles street to the west rail of the United Railways and Electric Company's tracks at the intersection of St. Paul street and University Parkway, was formerly water-bound macadam with cobble rebut and vitrified brick gutters. The gutter was moved in five feet toward the center of the road, repaved and granite headers set along the railway area from the east curb line of Charles street to the west building line of St. Paul street, and the macadam base reshaped and covered with two inches of bituminous concrete by the repair forces of the City Engineer's Department. Work was commenced on May 8 and completed June 14, 1913. The cost of the work was as follows:

Grading and setting 456 feet of headers, at $0.2367..........	$107 96
Grading and repaving 2,197 square feet of cobble rebut, at $0.1068...	234 69
Preparing 1,257.4 square yards of macadam base, at $0.3247.	408 29
Covering 1,257.4 square yards of 2-inch bituminous concrete, at $0.777	976 96
	$1,727 90

EDMONDSON AVENUE, FROM WEST END OF BRIDGE OVER GWYNN'S FALLS TO WESTERN CITY LINE.

Edmondson avenue, from the west end of the bridge over Gwynn's Falls to the Western city line, was a water-bound macadam street with a double railroad track along the south edge. Only a small portion of the distance was provided with gutters, the balance being simply a dirt ditch. This roadway was improved by rebuilding the macadam base and covering with two inches of bituminous concrete. For the first 400 feet west of the bridge the bituminous concrete was run from the railway area to the gutter, from that point to the western city line a strip of cobble was paved on each side, about one foot on the south side and five feet on the north side. Gutter stones were laid the entire length and cobble rebut gutters paved.

A sub-drain, 375 feet long, at Station 15-40 to Station 19-15 (Station 0 being at the west end of bridge) was laid along the south edge of the cobble paving to take care of the spring which developed in the roadbed. Two lines of pipe—one 15 inch and one 12 inch—were laid across the road to take care of the drainage. This work was commenced on March 25, 1913, and completed July 3, 1913.

	Sq. Yds.	Cost per Yd.	Amount.
Cobble paving	5,152.0	$0.8899	$4,585 23
Preparing macadam base for bituminous topping	8,975.5	.5106	4,583 14
Drainage, including the laying of 46 feet 15-inch and 30 feet 12-inch terra-cotta pipe	....	....	....
Terra-cotta pipe (375 feet 2½-inch drain) and building two inlets	....	....	114 35
Bituminous concrete, 2-inch topping	8,975.5	.95	8,562 72

GRANITE BLOCK PAVING ON PRATT STREET.

Pratt street, from header on west side of President street to west building line of Central avenue, including intersections. This work was begun on May 8, 1913, and finished October 27, 1913, but work was not continuous, caused by failure of delivery of granite blocks. Owing to the heavy amount of traffic on the street and its congested nature, caused by the double car tracks, it was decided to increase the width outside of car tracks; and, in order to accomplish this, the curb was moved and reset one foot nearer the building line on both sides of the street, which work is included in the cost of resetting curb.

EXPENDITURES.

Labor, as per pay rolls	$8,557 33
Granite block, 133,721 at $62.50	8,357 56
Granite block, 4,750 at $58	275 50
Hauling granite block, Barrett filler and excavation	841 50
Barrett block filler, 13,293 gallons at $0.0832	1,105 98

Gravel, 599 cubic yards at $1	$599 00
Paving sand, 698.1 cubic yards at $0.85	593 39
Screened gravel, 40.8 cubic yards at $2	81 60
Grits, 14.5 cubic yards at $1.20	18 60
Stone dust, 13.07 cubic yards at $0.85	11 11
Cement, 1,862 bags at $0.30	558 60
Coal, 5.63 tons at $4.75	26 75
Cost of testing 13,293 gallons of Barrett filler	12 00
Coal oil, 132 gallons at $0.09	11 88
Crushed stone (Ashland Avenue Lot), four cubic yards at $0.85	3 40
Curb iron, 100 lineal feet at $0.15	15 00
Cement, 21 bags at $0.30	6 30
Curb iron frogs, 40 at $0.04	1 60
Sundries—engine oil, waste, etc	2 51
	$21,079 91

Statement of Cost, Including Labor and Material.

Moving and resetting 2,262.4 lineal feet of granite curb, at $0.5252	$1,188 30
Redressing 2,262.4 lineal feet of granite curb, at $0.2321	525 23
Barring up and hauling 5,035 square years granite block pavement, at $0.281	1,414 14
Grading 1,260 cubic yards excavation, at $1.349	1,699 85
*Laying 4,235 square yards of 6-inch concrete, at $0.61	2,583 41
Paving with tar and gravel filler 5,035 square yards new granite block, at $2.6966	13,577 46
Constructing 95 lineal feet of concrete curb, at $0.8108	77 13
Coal oil, 132 gallons at $0.09	11 88
Sundries—engine oil, waste, etc	2 51
	$21,079 91

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*The yardage of concrete is the superficial area of the paving, less the tie area in tracks.

Respectfully submitted,

C. O. VANDEVANTER,
Assistant City Engineer.

IMPROVED PAVEMENTS UNDER GUARANTY, JANUARY 1, 1914.

Street.	From	To	Pavement.	Feet in Length.	Feet in Width.	Square Yards.	Price Per Yard.		Contractor.	Guaranty Expires.
							Railway Area.	Outside Area.		
Addison alley	S. C. L. Ramsay street	N. B. L. Wilkens avenue	Vitrified blocks.	221.00	12.10	304.00		$2.20	Thomas Mullan	May 17, 1915.
Aisquith street	S. B. L. Lexington street	S. B. L. Orleans street	Granite blocks	526.00	38.70	2,192.00	$3.45	3.45	P. F. Reddington	Oct. 11, 1914.
Aisquith street	3 ft. north of Ashland avenue	S. B. L. Chase street	Sheet asphalt.	945.00	36.00	3,871.00		1.74	W. M. Elder	Sept. 16, 1916.
†Aisquith street	N. C. L. Chase street	S. B. L. North avenue	Sheet asphalt..	2,842.70	35.62	11,744.00	1.87	1.59 1.73 .79	Elder Pav. & Contr. Co.	Jan. 15, 1918 (112).
Aisquith street	S. C. L. Orleans street	N. B. L. Monument street	Vitrified blocks.	1,165.15	35.39	2,101.16 2,630.00	2.08	2.08	David M. Andrew Co.	Feb. 12, 1918 (113).
†Aisquith street	N. B. L. Monument street	N. B. L. Ashland avenue	Sheet asphalt..	761.65	35.12	3,143.31	2.35	1.74 .78	Filbert Pav. & Const. Co.	Aug. 27, 1918 (10).
Allendale street	N. C. L. Clifton avenue	S. B. L. Windsor Mill road	Sheet asphalt..	650.40	24.00	1,769.00		1.59	F. E. Schneider Paving Co.	Oct. 15, 1917.
Ann street	N. B. L. Gough street	S. C. L. Pratt street	Sheet asphalt..	533.00	41.80	2,460.00		1.85	F. E. Schneider Paving Co.	June 29, 1914.
*Auchentoroly Terrace	S. C. L. Orem avenue	1,656 feet northerly	Sheet asphalt..	1,656.00	38.00	7,372.00		1.74	Filbert Pav. & Const. Co.	Nov. 30, 1914.
‡Augusta avenue	N. B. L. Frederick road	S. C. L. Old Frederick road	Bit. concrete...	1,563.00	40.00	6,850.00		1.24	Eastern Paving Co.	Dec. 19, 1918.
†Balderston street	W. B. L. Light street	E. B. L. Charles street	Granite blocks.	311.15	24.60	858.83		3.49	P. F. Reddington	Jan. 15, 1918.
†Barre street	E. B. L. Sharp street	E. rail Charles street	Granite blocks	751.30	38.95	3,245.40 174.10	3.34	3.09	N. A. Middleton & Co.	July 23, 1918 (136).
Barre street	W. B. L. Light street	W. B. L. Charles street	Granite blocks.	376.00	38.00	1,635.00		3.59	W. M. Elder	Aug. 24, 1916.
‡Belle avenue	W. C. L. Garrison avenue	Western city limits	Bit. concrete...	1,604.00	30.00	5,393.00		1.35	F. E. Schneider Paving Co.	Oct. 15, 1917.
*Belvieu avenue	W. B. L. Garrison avenue	Western city limits	Vitrified blocks	1,290.00	36.00	5,061.00	2.12	2.12	P. Flanigan & Sons	Oct. 21, 1914.
*Bentalou street	N. F. R. Baltimore street	N. B. L. Fayette street	Filbertine	508.00	40.00	2,333.00		1.78	Filbert Pav. & Const. Co.	Sept. 1, 1915.
‡Bentalou street	S. B. L. North avenue	N. B. L. Presbury street	Bit. concrete...	613.00	40.00	2,067.00		1.24	F. E. Schneider Paving Co.	Aug. 12, 1918.
‡Bernard street	N. B. L. Twenty-sixth street	S. B. L. Thirtieth street	Bit. concrete...	1,338.00	24.00	3,143.00		1.45	P. Flanigan & Sons	Sept. 25, 1918 (46).
‡Berry street	E. B. L. Elm street	W. B. L. Chestnut avenue	Vitrified blocks	484.30	12.50	703.00		2.07	P. Flanigan & Sons	Feb. 26, 1918.
†Biddle street	E. C. L. Bond street	W. B. L. Broadway	Vitrified blocks.	462.55	39.50	2,095.23		1.93	David M. Andrew Co.	Dec. 27, 1917.
†Biddle street	E. side Jones Falls	E. B. L. Bond street	Sheet asphalt..	3,907.45	39.35	18,319.43	2.29	**.79	Elder Pav. & Contr. Co.	Jan. 15, 1918 (114).
†Biddle street	E. B. L. Calvert street	W. B. L. Guilford avenue	Sheet asphalt..	304.00	39.55	1,377.70		1.55	Balto. Asph. Blk. & Tile Co.	Dec. 31, 1918.
†Bloom street	E. B. L. Pennsylvania avenue	W. B. L. Eutaw Place	Sheet asphalt..	1,565.00	39.46	7,268.30		1.55	Balto. Asph. Blk. & Tile Co.	Dec. 31, 1918 (62).
†Bolton street	N. C. L. Hoffman street	S. B. L. Lafayette avenue	Sheet asphalt.. Vitrified blocks.	1,162.30	38.70	5,186.10 102.66	2.20	.80	F. E. Schneider Paving Co.	Jan. 15, 1917.
†Bolton street	N. B. L. Lafayette avenue	S. B. L. North avenue	Bit. concrete...	1,963.13	38.83	8,676.17		1.45	Elder Pav. & Contr. Co.	Feb. 12, 1918 (115).
†Bond street	N. B. L. Gay street	S. B. L. Biddle street	Granite blocks.	619.24	41.80	2,965.95		2.98	Cunningham Pav. & Con. Co.	Dec. 6, 1917 (103).
†Bond street	N. B. L. Biddle street	S. B. L. North avenue	Sheet asphalt..	2,651.70	41.92-30.10	11,261.00		**.79	Elder Pav. & Contr. Co.	Jan. 15, 1918 (83).
†Bond street	N. B. L. Madison street	S. B. L. Gay street	Sheet asphalt..	953.00	42.10	4,804.51		1.74	Filbert Pav. & Const. Co.	Aug. 27, 1918 (9).
†Brevard street	W. C. L. Cathedral street	N. B. L. Dolphin street	Sheet asphalt.. Vitrified blocks.	1,219.25	35.85	3,015.50 2,175.70	1.70	2.20	F. E. Schneider Paving Co.	Sept. 11, 1917.
*Brunswick street	S. B. L. Frederick road	N. B. L. Wilkens avenue	Bitulithic	851.00	39.60	3,911.00		2.48	Warren Bros. Co.	Oct. 21, 1914.
*Brunswick street	S. B. L. Wilkens avenue	Bridge over Gwynns Falls	Granite blocks.	620.00	39.60	2,678.00		3.25	Warren Bros. Co.	Oct. 21, 1914.
Broadway (east side)	S. B. L. Gough street	N. B. L. Canton avenue	Sheet asphalt..	900.00	15.00-40.00	3,000.00		.93	Filbert Pav. & Const. Co.	Feb. 12, 1918 (129).
†Buren street	N. B. L. Madison street	N. B. L. Truxton street	Vitrified blocks	593.40	24.65-33.60	2,219.37		2.11	P. F. Reddington	Aug. 20, 1918.
Callendar alley	S. C. L. Columbia avenue	N. C. L. St. Peter street	Vitrified blocks	286.10	12.00	400.00		2.30	P. F. Reddington	Oct. 18, 1914.
Calvert street	Calvert Street Bridge	S. B. L. North avenue	Sheet asphalt..	1,245.00	36.00	5,079.00		1.15	F. E. Schneider Paving Co.	Sept. 30, 1916.
‡Calvert street	N. C. L. North avenue	S. C. L. Twentieth street	Sheet asphalt..	345.50	36.00	1,373.00		1.50	P. Flanigan & Sons	Mar. 6, 1918.
§Calvert street	S. C. L. Twentieth street	N. C. L. Twenty-fourth street	Bit. concrete...	1,482.60	36.00	5,645.50		.90	F. E. Schneider Paving Co.	Aug. 11, 1918 (72).
†Camden street	E. F. R. Hanover street	W. F. R. Charles street	Granite blocks	339.30	37.90	1,464.10		3.09	N. A. Middleton & Co.	July 23, 1918.
Canton street	W. B. L. Fairmount avenue	E. B. L. Fayette street	Vitrified blocks.	405.20	36.00	1,620.80			Frank Novak	Dec. 22, 1916 (88).
Canton street	S. C. L. Lombard street	N. C. L. Eastern avenue	Vitrified blocks.	1,697.30	36.00	7,001.00		1.78	Geo. Long Contracting Co.	Sept. 22, 1914.
Carey street	N. B. L. Columbia avenue	S. B. L. Pratt street	Granite blocks.	2,027.40	39.60	9,245.00		3.33	P. F. Reddington	Nov. 27, 1915.
†Caroline street	N. B. L. Oliver street	S. B. L. North avenue	Sheet asphalt..	1,606.40	47.93	9,002.20	2.20	1.74 1.67	Warner-Quinlan Asphalt Co.	Aug. 27, 1918 (11).
†Caroline street	S. B. L. Hoffman street	N. B. L. Chase street	Sheet asphalt..	965.05	47.77	5,029.60	2.20	1.74	Warner-Quinlan Asphalt Co.	Aug. 27, 1918 (11-12).
Carrollton avenue	S. B. L. Lanvale street	N. C. L. Harlem avenue	Sheet asphalt..	377.00	38.00	1,607.00	1.95	1.74	W. M. Elder	Sept. 12, 1916.
†Castle street	N. B. L. Fayette street	S. B. L. Madison avenue	Sheet asphalt..	1,818.20	30.12	6,411.50		1.65	U. S. Asphalt Refining Co.	Dec. 3, 1918 (38).
‡Catherine street	N. B. L. Baltimore street	N. B. L. Fayette street	Bit. concrete...	435.00	30.00	1,478.00		1.55	Penn-Mar Construction Co.	Dec. 19, 1918.
‡Catherine street	S. B. L. Baltimore street	N. C. L. Lombard street	Vitrified blocks	578.00	39.60	7,957.00		2.08	Penn-Mar Construction Co.	Nov. 14, 1917 (106).
‡Cecil avenue	N. C. L. Twentieth street	S. C. L. Twenty-second street	Vitrified blocks.	403.20	39.60	1,775.00		2.07	P. Flanigan & Sons	Feb. 26, 1918.
†Central avenue	S. B. L. Oliver street	E. C. L. Harford avenue	Vitrified blocks	179.80	43.00		2.14	2.14	D. M. Andrews Co.	Dec. 27, 1917.
†Central avenue	N. B. L. Pratt street	S. B. L. Oliver street	Vitrified blocks	1,499.68 4,247.75	73.82 41.71	32,765.63	3.45 2.03	1.95	Martin J. Beach	Oct. 8, 1918 (30).
†Central avenue	N. F. R. Fleet street	N. B. L. Pratt street	Granite blocks.	1,330.78	73.93	11,157.79	3.25	3.25	John E. Quinn	Oct. 29, 1918 (82).
†Portions of Central ave.	S. B. L. Fawn street	N. B. L. Fayette street	Granite blocks. Vitrified blocks.	1,061.03	73.94	8,995.22	3.45	2.15 3.20	Martin J. Beach	Nov. 19, 1918 (29-71).
§Charles street	N. B. T. University Parkway	73.3 ft. W. of Charcoat road	Bit. concrete...	2,412.00	40.00	10,221.04		.90	Warner-Quinlan Asphalt Co.	Oct. 28, 1918 (73).
†Charles street	S. B. L. Hill street	S. B. L. Barre street	Vitrified blocks.	744.10	39.20	3,356.65	2.27	2.24	P. F. Reddington	Aug. 20, 1918 (18).
†Cheapside	N. B. L. Pratt street	S. B. L. Water street	Granite blocks.	466.80	39.90	2,020.90		3.45	P. F. Reddington	Sept. 24, 1918 (27).

IMPROVED PAVEMENTS UNDER GUARANTY, JANUARY 1, 1914.—Continued

Street.	From.	To.	Pavement.	Feet in Length.	Feet in Width.	Square Yards.	Price per Yard.		Contractor.	Guaranty Expires.
							Railway Area.	Outside Area.		
‡Chester street.........	N. B. L. North avenue..........	S. B. L. Clifton Park...........	Bit. concrete...	605.00	42.00	2,717.00	....	1.24	Elder Pav. & Contr. Co....	Aug. 12, 1918.
†Chester street.........	S. B. L. Lombard street..........	N. B. L. Pratt street...........	Bit. concrete...	357.00	42.55	1,737.89	....	1.38	Filbert Pav. & Const. Co...	July 23, 1918 (132).
†Chester street.........	S. B. L. Lombard street..........	S. B. L. Baltimore street.........	Sheet asphalt..	326.05	42.05	2,048.20	....	**.74 1.74	Warner-Quinlan Asphalt Co.	Feb. 19, 1918 (116).
†Chester street.........	N. B. L. Monument street.......	N. C. L. Ashland avenue.........	Sheet asphalt..	703.93	41.56	3,339.70	....	**.77	P. Flanigan & Sons.......	July 23, 1918 (1-116).
†Chester street.........	N. F. R. Eager street..........	S. B. L. Chase street...........	Sheet asphalt..	436.90	41.95	2,060.00	....	**.77	P. Flanigan & Sons.......	July 23, 1918 (1).
†Chester street.........	N. B. L. Orleans street..........	S. B. L. McElderry street........	Sheet asphalt..	666.60	41.92	3,131.90	1.83	1.62	P. Flanigan & Sons.......	July 23, 1918 (1).
†Chester street.........	N. C. L. Ashland avenue.........	S. F. R. Eager street............	Granite blocks.	442.20	41.77	2,072.74	....	2.97	N. A. Middleton & Co.....	July 23, 1918.
Chester street.........	S. B. L. Orleans street..........	N. B. L. Baltimore street........	Sheet asphalt..	1,253.30	42.00-39.00	6,060.00	2.00	1.85	F. E. Schneider Paving Co.	Oct. 23, 1914.
*Chestnut avenue.......	N. B. L. Third avenue	N. B. L. Fourth avenue........	Vitrified blocks.	581.00	36.00	2,592.00	....	2.17	P. F. Reddington..........	Aug. 7, 1914.
*Chestnut Hill avenue..	E. B. L. York Road...........	W. B. L. Old York road........	Bitulithic	503.00	18.00	1,021.00	....	2.25	W. M. Elder..............	Aug. 7, 1914.
Clement street.........	E. C. L. William street..........	W. B. L. Riverside avenue......	Bitulithic	436.60	36.00	1,898.00	....	2.28	Warren Bros. Co..........	June 30, 1914.
‡Cleveland avenue......	N. B. L. Springdale avenue......	S. B. L. Liberty Heights avenue..	Bit. concrete...	621.00	30.00	1,924.00	....	1.58	J. H. Cranford Const. Co..	Oct. 20, 1918 (47).
*Clifton avenue.........	E. B. L. Twelfth street.........	140 ft. E. of E. B. L. 16th street..	Bitulithic	2,032.30	39.60	8,916.00	3.25	2.15	Warren Bros. Co..........	Nov. 9, 1914 (89).
Cokesbury avenue......	1 ft. east of Old York road......	495 ft. east and southward.......	Vitrified blocks.	495.00	35.00-39.60	2,297.00	....	2.15	W. M. Elder..............	May 1, 1916.
*Cokesbury avenue......	N. W. B. L. Adams street......	300 ft. northward...............	Vitrified blocks.	300.00	36.00	1,808.00	....	1.90	Consolidated Eng. Co......	Dec. 2, 1916.
†Collington avenue......	S. B. L. Baltimore street........	N. B. L. Pratt street...........	Bit. concrete...	713.55	41.92	3,480.96	....	1.38	Filbert Pav. & Const. Co...	July 23, 1918 (133).
†Collington avenue......	N. B. L. Orleans street..........	S. B. L. Ashland avenue.........	Sheet asphalt..	1,754.90	30.10	6,437.70	....	1.74	Warner-Quinlan Asphalt Co.	Feb. 19, 1918 (117-78).
†Colvin street..........	N. B. L. Gay street.............	S. B. L. Front street............	Vitrified blocks.	750.95	38.42	3,214.54	....	2.11	P. F. Reddington..........	Aug. 20, 1918 (20).
†Commerce street.......	N. B. L. Pratt street............	S. B. L. Lombard street.........	Granite blocks.	331.80	35.90	1,326.30	....	3.53	Geo. Long Contracting Co.	Dec. 17, 1918.
†Commerce street.......	N. B. L. Lombard street.........	S. B. L. Baltimore street.........	Vitrified blocks.	170.80 369.65	32.20 35.30	538.63 1,468.56	2.27	2.24	P. F. Reddington..........	Aug. 20, 1918 (19).
†Constitution street.....	N. B. L. Front street............	S. B. L. Monument street.......	Granite blocks	7,490.70	29.00-42.00	1,888.75	....	3.17	Cunningham Pav. & Con. Co.	Dec. 6, 1917.
†Conway street.........	E. B. L. Sharp street............	W. B. L. Light street...........	Sheet asphalt..	1,042.55	38.40-37.00	4,201.22	3.25	1.74	Filbert Pav. & Const. Co...	Aug. 27, 1918 (25).
Courtland street........	N. B. L. Hamilton street........	S. C. L. Centre street...........	Vitrified blocks.	312.00	30.00	743.00	....	2.20	Filbert Pav. & Const. Co...	June 20, 1916.
Curley street..........	N. B. L. Baltimore street........	S. B. L. Fairmount avenue......	Vitrified blocks.	334.70	24.00	914.00	....	2.17	P. F. Reddington..........	April 29, 1914.
†Davis street...........	N. B. L. Lexington street........	S. B. L. Bath street............	Granite blocks	30.20 24.88 34.45	31.35 380.40 800.55	4,007.24	....	3.12	Geo. Long Contracting Co.	July 2, 1918.
‡Dennison street........	N. B. L. Clifton avenue..........	N. B. L. Elgin avenue..........	Sheet asphalt..	771.00	32.00	8,528.00	....	1.59	F. E. Schneider Paving Co.	Oct. 15, 1917.
†Division street.........	N. B. L. Lafayette avenue........	N. B. L. Mosher street..........	Bit. concrete...	388.80	38.95	1,821.60	2.15	1.27	P. Flanigan & Sons.......	July 23, 1918 (130-131).
†Dolphin street.........	E. B. L. Brevard street..........	W. B. L. Mt. Royal avenue......	Sheet asphalt..	484.20	39.05	2,256.20	....	.80	F. E. Schneider Paving Co.	Aug. 28, 1917.
†Dover street...........	E. B. L. Eutaw street...........	W. C. L. Hopkins Place..........	Vitrified blocks.	149.95 437.40 133.55	12.00 16.02 20.35	1,283.80	....	2.06	M. J. Beach..............	Dec. 10, 1917 (104).
Eager street...........	E. C. L. Homewood avenue......	W. B. L. Ensor street...........	Sheet asphalt..	769.00	38.60	3,325.00	....	1.89	F. E. Schneider Paving Co.	May 14, 1915.
†Eager street...........	E. B. L. Broadway..............	W. B. L. Chester street.........	Sheet asphalt..	1,724.60	39.10	8,216.80	2.30	1.76 **.77	P. Flanigan & Sons........	July 23, 1918 (1-4).
†Eager street...........	E. side Jones Falls..............	E. C. L. Homewood avenue......	Sheet asphalt..	1,141.30	38.83	5,359.67	....	1.74	Filbert Pav. & Const. Co...	Aug. 27, 1918 (5).
†Eager street...........	E. B. L. Ensor street...........	W. B. L. Broadway.............	Sheet asphalt..	2,187.10	38.75	9,953.32	2.35	1.74	Filbert Pav. & Const. Co...	Aug. 27, 1918 (6).
†East street............	S. B. L. Front street............	N. B. L. Low street.............	Vitrified blocks.	983.63	30 25-37.70	3,849.22	....	2.09	Consolidated Eng. Co......	Sept. 17, 1918 (21).
†Eden street............	S. B. L. Lanvale street..........	N. B. L. Madison street.........	Sheet asphalt..	3,249.78	41.76	15,565.30	2.20	2.10 1.67	Warner-Quinlan Asphalt Co.	Aug. 27, 1918 (15.)
*Edmondson avenue....	E. C. L. Second street..........	340 ft. W. of W. C. L. 7th street.	Granite blocks.	2,784.60	In ry. tracks	6,597.00	3.10	....	F. E. Schneider Paving Co.	Oct. 27, 1915 (89).
*Edmondson avenue....	E. C. L. Second street..........	Gwynns Falls Bridge...........	Sheet asphalt..	3,708.10	38.00-60.00	15,863.00	....	1.90	F. E. Schneider Paving Co.	Oct. 27, 1915.
Edmondson avenue....	W. C. L. Fulton avenue..........	P., B. & W. Ry., over bridge...	Sheet asphalt.. Granite blocks.	1,765.00	39.00	6,658.00 1,837.00	1.95 3.64	1.74	W. M. Elder..............	Sept. 22, 1916.
§Edmondson avenue....	W. end Gwynn's Falls Bridge....	Western city limits..............	Bit. concrete...	4,322.00	18.00	8,975.50	....	.95	Warner-Quinlan Asphalt Co.	June 23, 1918 (73).
‡Elgin avenue..........	E. B. L. Garrison avenue........	W. B. L. Dennison street........	Sheet asphalt..	380.00	32.00	1,350.00	....	1.59	F. E. Schneider Paving Co.	Oct. 15, 1917.
Ellwood avenue........	N. B. L. Fairmount avenue......	S. B. L. Fayette street..........	Vitrified blocks.	405.00	36.00	1,624.00	....	2.10	Geo. Long Contracting Co.	Dec. 12, 1916 (88).
Ensor street...........	S. B. L. Lamont avenue.........	S. B. L. North avenue.........	Sheet asphalt..	335.50	19.80	871.00	....	1.80	F. E. Schneider Paving Co.	July 31, 1914.
Ensor street...........	N. C. L. Gay street..............	N. B. L. Ashland avenue........	Vitrified blocks.	1,798.03	30.27	6,948.57	1.35 2.08	2.08	David M. Andrew Co......	Feb. 12, 1918 (118).
†Ensor street...........	N. B. L. Ashland avenue........	E. C. L. Harford avenue........	Granite blocks.	625.95	30.10	2,243.69	....	2.97	N. A. Middleton & Co.....	July 23, 1918.
†Ensor street...........	S. B. L. Lamont avenue..........	N. B. L. Chase street............	Bit. concrete...	645.70 321.65 1,594.60	39.15 30.08 19.60	7,561.28	....	4.90	Warner-Quinlan Asphalt Co.	Nov. 12, 1918 (35).
†Exeter street..........	S. B. L. Baltimore street.........	N. B. L. Lombard street.........	Granite blocks.	450.50	29.37	1,540.16	....	3.12	Cunningham Pav. & Con. Co.	Jan. 14, 1919.
†Exeter street..........	N. B. L. Fayette street..........	S. B. L. Low street.............	Granite blocks.	953.95	31.05	3,210.27	....	3.12	Cunningham Pav. & Con. Co.	Jan. 14, 1919 (55).
†Exeter street..........	N. B. L. Gay street.............	S. B. L. Front street............	Granite blocks.	808.30	31.00	3,231.69	1.53	3.12	Cunningham Pav. & Con. Co.	Jan. 14, 1919 (56).
†Exeter street..........	S. B. L. Fayette street..........	N. B. L. Baltimore street........	Granite blocks.	311.35	24.15	840.32	....	3.45	P. F. Reddington..........	July 30, 1918.
Fairmount avenue......	W. B. L. Kenwood avenue.......	Eastern city limits..............	Vitrified blocks.	1,553.90	42.00	5,301.00	1.00	2.22	P. F. Reddington..........	July 8, 1914 (91).
‡Fairmount avenue......	W. B. L. Catherine street........	E. B. L. Shipley street..........	Bit. concrete...	526.00	30.00	1,614.00	....	1.55	Penn-Mar Construction Co.	Dec. 19, 1918.
‡Fairview avenue.......	E. B. L. Garrison avenue.........	W. B. L. Grantley street........	Bit. concrete...	938.00	30.00	2,604.00	....	1.65	Balto. Asph. Blk. & Tile Co.	Dec. 11, 1918 (48).
‡Fallsway (first section).	400 ft. north of Bath street......	S. B. L. Baltimore street........	Granite blocks.	2,600.00	50.00	15,583.00	....	2.64	David M. Andrew Co......	Nov. 25, 1918 (54).

IMPROVED PAVEMENTS UNDER GUARANTY, JANUARY 1, 1914.—Continued

Street.	From.	To.	Pavement.	Feet in Length.	Feet in Width.	Square Yards.	Price per Yard.		Contractor.	Guaranty Expires.
							Railway Area.	Outside Area.		
Fayette street	E. B. L. Lakewood avenue	Eastern city limits	Sheet asphalt	1,882.30	42.00	9,508.00	....	1.83	Filbert Pav. & Const. Co.	Dec. 9, 1915.
†Fayette street	E. B. L. Pine street	W. B. L. Paca street	Vitrified blocks.	1,180.63	39.00	5,125.30	3.75	2.55	Field, Barker & Underwood.	Oct. 8, 1918 (45).
‡Fayette street	W. B. L. Catherine street	W. B. L. Shipley street	Bit. concrete	667.00	30.00	2,111.00	....	1.55	Penn-Mar Construction Co.	Dec. 19, 1918.
*First avenue	W. B. L. Cedar avenue	Wyman Park	Dimensions, etc.	included in Remington avenue, 29th street to Cedar avenue...					F. E. Schneider Paving Co.	June 7, 1915 (102).
†Fort avenue	W. B. L. Lawrence street	Fort McHenry	Sheet asphalt	4,978.70	49.50	27,755.06	1.70 2.40	1.70	P. Flanigan & Sons	Dec. 17, 1918 (58-59).
†Forrest street	N. B. L. Eager street	S. B. L. Chase street	Sheet asphalt	435.70	30.10	1,456.51	....	**.93	Filbert Pav. & Const. Co.	Feb. 12, 1918 (94-104).
‡Forrest avenue	E. C. L. Garrison avenue	W. B. L. Callaway avenue	Bit. concrete	945.00	30.00	3,118.00	....	1.35	F. E. Schneider Paving Co.	Nov. 14, 1917.
†Forrest avenue	N. B. L. Lexington street	N. C. L. Orleans street	Vitrified blocks.	518.25	23.55	2,119.50	....	2.08	M. J. Beach	Sept. 11, 1917.
‡Forest Park avenue	W. B. L. Garrison avenue	Western city limits	Bit. concrete	1,687.00	24.00-31.00	4,899.00	....	1.60	J. H. Cranford Const. Co.	Dec. 11, 1918 (49).
*Fourth avenue	E. B L. Falls road	E. B. L. Hickory avenue	Granite blocks.	336.00	36.00	1,310.00	....	3.35	Warren Bros. Co.	Aug. 7, 1914.
*Fourth avenue	E. B. L. Hickory avenue	W. B. L. Chestnut avenue	Bitulithic	1,214.00	36.00	5,220.00	....	2.24	Warren Bros. Co.	Aug. 7, 1914 (90).
*Fourteenth street	N. B. L. Clifton avenue	S. B. L. Windsor Mill road	Sheet asphalt	436.00	39.60	2,030.00	....	2.00	F. E. Schneider Paving Co.	July 25, 1914.
‡Fortieth street	E. C. L. Roland avenue	W. C. L. University Parkway	Sheet asphalt	2,087.00	32.00	8,063.00	....	1.55	Elder Pav. & Contr. Co.	Aug. 12, 1918.
†Frederick street	N. B. L. Pratt street	S. B. L. Lexington street	Granite blocks.	1,433.45	28.00	4,593.72	....	3.27	Geo. Long Contracting Co.	July 2, 1918 (3).
†Frederick street	N. B. L. Lexington street	E. B. L. Gay street	Granite blocks.	298.15	21.00	669.03	....	3.45	P. F. Reddington	July 30, 1918.
Fremont street	N. F. R. Baltimore street	S. F. R. Lexington street	Granite blocks.	799.60	39.00	3,353.00	3.49	3.49	P. F. Reddington	Dec. 11, 1914.
Fremont street	S. F. R. Baltimore street	N. F. R. Pratt street	Granite blocks.	1,094.00	39.00	4,799.00	3.64 3.34	3.59 3.29	W. M. Elder	Dec. 24, 1916.
†Front street	S. B. L. Baltimore street	N. B. L. Lombard street	Vitrified blocks.	468.60 122.30	21.72 29.80	1,755.83	....	2.09	Consolidated Eng. Co.	Sept. 17, 1918 (26).
†Front street	N. B. L. Gay street	S. B. L. Hillen street	Sheet asphalt	421.75	30.10	1,437.72	....	1.74	Filbert Pav. & Const. Co.	Aug. 27, 1918.
†Front street	S. E. B. L. Exeter street	W. B. L. Forrest street	Granite blocks.	17.60 714.05	33.05 23.42	2,254.95	....	3.27	Cunningham Pav. & Con. Co.	Oct. 8, 1918.
†Front street	N. B. L. Hillen street	E. High street	Granite blocks.	185.60 293.50 164.77	30.30 21.70 44.10	2,098.67	....	3.27	Cunningham Pav. & Con. Co.	Oct. 8, 1918.
Fulton avenue	S. C. L. Baltimore street	N. F. R. Frederick street	Granite blocks.	276.90	39.00	1,213.00	....	3.39	John C. Leonard	May 14, 1914.
Fulton avenue	S. B. L. Wilkens avenue	S. F. R. Frederick street	Vitrified blocks.	1,742.00	39.00	7,910.00	2.16	2.07	W. M. Elder	July 24, 1916.
Garrett alley	W. F. R. Howard street	E. F. R. Eutaw street	Granite blocks.	359.30	11.80	442.00	....	2.50	Thomas Mullan	Oct. 21, 1914.
*Garrison avenue	New Liberty Road	Northern city limits	Sheet asphalt	4,407.00	40.00	23,635.00	3.15	1.90	P. Flanigan & Sons	(93).
‡Garrison lane	N. B. L. Frederick road	S. B. L. Baltimore street	Vitrified blocks.	1,863.00	22.00	4,734.00	....	2.08	Penn-Mar Construction Co.	Nov. 14, 1917.
†German street	E. B. L. Penn street	E. B. L. Fremont street	Vitrified blocks.	717.35	35.20	2,901.60	....	2.08	M. J. Beach	Nov. 6, 1917.
†German street	W. B. L. Paca street	E. B. L. Penn street	Granite blocks.	935.80	35.72	3,814.30	....	3.45	P. F. Reddington	Sept. 24, 1918 (28).
Glover street	S. C. L. Foster street	N. F. R. Fait avenue	Vitrified blocks.	328.00	24.00	875.00	....	....	Geo. Long Contracting Co.	Nov. 29, 1916 (88).
†Gold street	E. B. L. Druid Hill avenue	W. B. L. Madison avenue	Sheet asphalt	491.45	39.00	2,165.10	....	1.55	Balto. Asph. Blk. & Tile Co.	Dec. 31, 1918 (64).
*Gorsuch avenue	E. B. L. York Road	W. B. L. Harford road	Bitulithic	5,753.00	36.00	22,892.00	2.98	2.34	W. M. Elder	Aug. 7, 1914 (92).
†Granby street	Jones Falls wall	W. B. L. Exeter street	Vitrified blocks.	830.85	30.03	2,860.54	....	2.09	Consolidated Eng. Co.	Sept. 17, 1918 (22).
‡Grantley street	N. B. L. Springdale avenue	S. B. L. Fairview avenue	Bit. concrete	415.00	30.00	1,120.00	....	1.65	Balto. Asph. Blk. & Tile Co.	Dec. 11, 1918.
†Greene street	N. B. L. Baltimore street	S. B. L. Lexington street	Vitrified blocks.	664.68	39.08	2,810.00	....	2.45	Field, Barker & Underwood.	Oct. 8, 1918.
†Greene street	N. B. L. Lombard street	S. B. L. Baltimore street	Sheet asphalt	591.15	39.33	2,709.90	....	2.10	Warner-Quinlan Asphalt Co.	Aug. 27, 1918.
‡Greenway	E. B. L. Hopkins Circle	W. C. L. St. Paul street	Sheet asphalt	706.00	40.00	2,803.00	....	1.70	American Pav. & Contr. Co.	Dec. 20, 1918.
Grove street	N. C. L. Fairmont avenue	S. C. L. Fayette street	Vitrified blocks.	433.00	24.00	1,187.00	....	1.80	Balto. Contr. & Wreck. Co.	Aug. 31, 1915.
Guilford avenue	N. F. R. Twenty-third street	S. C. L. Twenty-fourth street	Sheet asphalt	338.00	36.00	1,361.00	....	1.10	Filbert Pav. & Const. Co.	Sept. 30, 1916.
‡Guilford avenue	N. B. L. Twenty-seventh street	S. B. L. Thirty-first street	Bit. concrete	1,740.00	36.00	7,037.00	....	1.55	Balto. Asph. Blk. & Tile Co.	Nov. 1, 1918 (50).
†Guilford avenue	N. B. L. Lanvale street	S. B. L. North avenue	Vitrified blocks.	759.40	36.09	1,512.05 1,595.00	2.14	2.09	P. F. Reddington	Jan. 31, 1918.
†Hamburg street	E. B. L. Light street	Federal Hill Park	Sheet asphalt	359.00 1,026.30	19.45 23.53	3,976.44	....	1.75	Balto. Asph. Blk. & Tile Co.	Jan. 14, 1919 (86).
‡Hampden avenue	S. B. L. Twenty-seventh street	S. B. L. Twenty-ninth street	Bit. concrete	757.00	30.00	2,604.00	....	1.24	Elder Pav. & Contr. Co.	Feb. 26, 1918.
†Harford avenue	S. B. L. Oliver street	S. B. L. North avenue	Vitrified blocks.	1,750.00	30.00	3,947.40 3,399.71	2.14	2.14 3.40	David M. Andrew Co.	Dec. 27, 1917.
†Harford avenue	E. C. L. Ensor street	S. B. L. Oliver street	Sheet asphalt	1,750.13	30.00	5,891.00	....	1.59	Elder Pav. & Contr. Co.	Jan. 15, 1918 (120).
†Harford avenue	S. C. L. Ashland avenue	S. C. L. Ensor street	Granite blocks.	766.73	28.40-30.05	2,607.57	....	2.97	N. A. Middleton & Co.	July 23, 1918.
†Harford road	N. Forrest street	S. B. L. Ashland avenue	Sheet asphalt	1,039.60	30.12	3,751.87	3.25	1.74	Filbert Pav. & Const. Co.	Aug. 27, 1918 (8).
Hargrove alley	N. B. L. Hamilton street	S. C. L. Centre street	Vitrified blocks.	227.00	20.00	476.00	....	2.20	Filbert Pav. & Const. Co.	July 27, 1916.
Hargrove alley	N. C. L. Preston street	S. B. L. Mt. Royal avenue	Vitrified blocks.	276.00	19.80	580.00	....	2.18	W. M. Elder	Dec. 1, 1914.
‡Hickory avenue	N. B. L. Thirty-sixth street	N. B. L. Thirty-eighth street	Bit. concrete	1,093.00	32.00	3,720.00	....	1.57	Warner-Quinlan Asphalt Co.	Dec. 11, 1918 (51).
High street	N. C. L. Fayette street	S. F. R. Lexington street	Sheet asphalt	513.00	28.00	1,656.00	....	1.74	W. M. Elder	Oct. 10, 1916.
†High street	N. B. L. Baltimore street	N. C. L. Fayette street	Sheet asphalt	318.00	30.05-29.35	1,144.27	3.25	1.74	Filbert Pav. & Const. Co.	Aug. 27, 1918.
†High street	N. B. L. Lexington street	S. B. L. Hillen street	Sheet asphalt	1,052.05	30.10	3,628.48	....	1.74	Filbert Pav. & Const. Co.	Aug. 27, 1918.
†High street	N. B. L. Hillen street	S. B. L. Front street	Granite blocks.	324.30 39.20	44.50 37.10	1,769.22	....	3.27	Cunningham Pav. & Con. Co.	Oct. 8, 1918.
‡Hilton street	N. B. L. Morris avenue	S. B. L. Windsor avenue	Sheet asphalt	1,627.00	32.00-29.00	5,975.00	....	1.78	J. H. Cranford Const. Co.	Nov. 18, 1918 (52).
†Hoffman street	E. B. L. Greenmount avenue	W. B. L. Eden street	Sheet asphalt	2,301.45	30.10	8,424.68	....	**.79	Elder Pav. & Contr. Co.	Jan. 15, 1918 (121).

IMPROVED PAVEMENTS UNDER GUARANTY, JANUARY 1, 1914.—Continued

Street.	From.	To.	Pavement.	Feet in Length.	Feet in Width.	Square Yards.	Price per Yard.		Contractor.	Guaranty Expires.
							Railway Area.	Outside. Area.		
†Hoffman street	E. B. L. Caroline street	W. B. L. Bond street	Sheet asphalt	335.45	39.42	1,571.41	....	**.79	Elder Pav. & Contr. Co.	Jan. 15, 1918 (122).
†Hoffman street	E. B. L. Eutaw Place	W. C. L. Brevard street	Sheet asphalt Vitrified blocks.	1,313.90	39.12	5,807.20 203.70	2.20	.80	F. E. Schneider Paving Co.	Aug. 28, 1917.
†Holbrook street	N. B. L. Hoffman street	S. B. L. Lamont avenue	Sheet asphalt	1,321.05	30.20	4,586.34	....	**.93	Filbert Pav. & Const. Co.	Feb. 12, 1918 (68-123-129).
†Hollins street	W. B. L. Fremont street	About 382 ft. westerly	Vitrified blocks.	381.35	38.50	1,630.90	1.94	1.79	Cunningham Pav. & Con. Co.	Aug. 27, 1918.
Hollins street	W. C. L. Calverton Road	E. C. L. Wilkens street	Vitrified blocks.	905.20	39.60	4,154.00	....	2.10	P. F. Reddington	June 30, 1915.
Hollins street	E. C. L. Garrison lane	W. B. L. Catherine street	Vitrified blocks.	643.00	39.00	2,786.00	....	2.07	W. M. Elder	June 1, 1916.
Hollins street	E. B. L. Poppleton street	Hutton's Gate	Vitrified blocks.	602.00	18.00	1,236.00	....	....	Filbert Pav. & Const. Co.	Sept. 29, 1915 (101).
†Homewood avenue	N. B. L. Eager street	S. B. L. Chase street	Sheet asphalt	434.55	39.75	1,962.58	....	**.93	Filbert Pav. & Const. Co.	Feb. 12, 1918 (122-129).
‡Huntingdon avenue	100 ft. west of W. B. L. Oak street.	S. B. L. Thirty-first street	Sheet asphalt	2,467.00	52.00	9,260.00	....	1.86	F. E. Schneider Paving Co.	Aug. 12, 1917.
‡Huntingdon avenue	100 ft. west of W. B. L. Oak street.	S. B. L. Thirty-first street	Granite blocks.	2,467.00	Ry. tracks.	4,513.00	3.20	....	F. E. Schneider Paving Co.	Aug. 12, 1917.
Intersection of Madison, on St. Paul and Calvert streets			Bitulithic	66.00	38.30	430.00	....	2.48	Warren Bros. Co.	Sept. 16, 1914.
†Jefferson street	E. B. L. Aisquith street	W. B. L. Broadway	Sheet asphalt	2,010.40	35.64	8,582.20	2.30	2.22 .77	P. Flanigan & Sons	July 23, 1918 (1-137).
†Jefferson street	W. B. L. Patterson Park avenue.	W. B. L. Milton avenue	Sheet asphalt	732.60	35.97	3,151.94	2.25	**.93	Filbert Pav. & Const. Co.	Feb. 12, 1918 (124).
†Jefferson street	E. B. L. Wolfe street	W. B. L. Patterson Park avenue.	Sheet asphalt	1,563.60	36.04	6,674.00	1.76 **.77	1.83	P. Flanigan & Sons	July 23, 1918 (1-116).
†Jenkins alley	N. B. L. Preston street	S. B. L. Hoffman street	Vitrified blocks.	329.35	11.90	444.70	....	1.90	Consolidated Eng. Co.	July 16, 1917.
†John street	N. B. L. Lanvale street	S. B. L. North avenue	Sheet asphalt	1,603.78	38.33	6,713.50	1.55	1.55	Balto. Asph. Blk. & Tile Co.	Dec. 31, 1918 (65).
†John street	N. B. L. Dolphin street	S. B. L. Lanvale street	Vitrified blocks.	341.55	38.75	1,534.80	....	2.20	Balto. Asph. Blk. & Tile Co.	Dec. 31, 1918.
‡Kathland avenue	W. B. L. Oakfield avenue	Western city limits	Bit. concrete	399.00	24.00	1,073.00	....	1.60	J. H. Cranford Const. Co.	Dec. 11, 1918.
†Kenwood avenue	N. B. L. Baltimore street	S. B. L. Fairmount avenue	Gunite	334.20	42.03	1,570.04	....	.60 .80	F. E. Schneider Paving Co.	Nov. 7, 1917 (105).
‡Keyworth street	Park Heights avenue	Reisterstown road	Asphalt mac.	381.00	39.60	2,007.00	....	1.55	D. M. Andrew Co.	April 11, 1914 (110).
†Lafayette avenue	Aisquith street	W. B. L. Broadway	Bit. concrete	1,831.43	39.45	8,573.77	....	4.90	Warner-Quinlan Asphalt Co.	Nov. 12, 1918 (32).
†Lafayette avenue	E. B. L. Maryland avenue	W. B. L. Greenmount avenue	Sheet asphalt	2,099.70	39.30	9,599.80	2.25	1.55	Balto. Asph. Blk. & Tile Co.	Dec. 31, 1918 (66).
Lakewood avenue	9 ft. N. of N. C. L. Monument st.	S. C. L. Madison street	Vitrified blocks.	337.00	42.00	1,575.00	....	....	M. J. Beach	May 12, 1916 (88).
Lanvale street	E. C. L. Eutaw Place	W. C. L. Linden avenue	Sheet asphalt	304.00	39.00	1,376.00	....	1.99	F. E. Schneider Paving Co.	June 2, 1914.
Lanvale street	E. F. R. Charles street	W. F. R. Greenmount avenue	Sheet asphalt	1,981.00	39.00	8,244.00	....	1.15	F. E. Schneider Paving Co.	Oct. 26, 1916.
†Lanvale street	E. B. L. Ensor street	W. B. L. Broadway	Bit. concrete	1,775.60 370.65	39.40 29.93	9,668.90	....	4.90	Warner-Quinlan Asphalt Co.	Nov. 12, 1918 (31).
†Lanvale street	E. B. L. Park avenue	W. B. L. Mt. Royal avenue	Sheet asphalt	711.15	38.85	3,245.40	....	1.62	Balto. Asph. Blk. & Tile Co.	Nov. 26, 1918 (41-42).
†Lanvale street	E. B. L. Linden avenue	W. B. L. Park avenue	Sheet asphalt	645.80	39.05	2,893.30	....	1.65	U. S. Asphalt Refining Co.	Dec. 3, 1918 (36).
†Lanvale street	E. B. L. Madison avenue	W. B. L. Eutaw Place	Sheet asphalt	289.20	38.80	1,300.30	....	1.65	U. S. Asphalt Refining Co.	Dec. 3, 1918.
Laurens street	W. C. L. Park avenue	E. C. L. Bolton street	Bitulithic	324.70	39.00	1,460.00	....	2.22	Warren Bros. Co.	Aug. 17, 1915.
†Laurens street	E. B. L. Eutaw Place	W. B. L. Linden avenue	Sheet asphalt	287.80	38.85	1,290.40	....	1.70	P. Flanigan & Sons	July 23, 1918 (131).
†Laurens street	E. B. L. Pennsylvania avenue	W. B. L. Druid Hill avenue	Sheet asphalt	801.95	39.34	3,731.60	....	1.70	P. Flanigan & Sons	July 23, 1918 (131).
†Laurens street	E. B. L. Linden avenue	W. B. L. Bolton street	Sheet asphalt	319.90	38.93	1,453.30	....	1.62	Balto. Asph. Blk. & Tile Co.	Nov. 26, 1918.
†Lemmon street	W. C. L. Greene street	E. B. L. Fremont street	Vitrified blocks.	225.85 809.15	18.11 12.03	1,941.60	....	2.06	M. J. Beach	Dec. 10, 1917 (138).
‡Liberty Heights avenue	E. C. L. Garrison avenue	W. B. L. Callaway avenue	Bit. concrete	1,061.00	32.00	3,775.00	....	1.35	F. E. Schneider Paving Co.	Nov. 14, 1917 (107).
†Linden avenue	N. B. L. Dolphin street	S. B. L. North avenue	Sheet asphalt	3,103.00	38.74	5,257.25 8,098.39	2.10 3.25	1.68	F. E. Schneider Paving Co.	July 23, 1918 (134-135-85).
†Linden avenue	N. B. L. Biddle street	N. B. L. Dolphin street	Sheet asphalt	1,189.10	38.97	5,080.83	2.20	1.70	Eastern Paving Co.	Dec. 3, 1918 (40-41).
Linwood avenue	N. B. L. Fayette street	S. B. L. Philadelphia road	Vitrified blocks.	97.00	42.00	455.00	....	2.12	M. J. Beach	April 3, 1916.
Linwood avenue	N. C. L. Biddle street	S. C. L. Preston street	Vitrified blocks.	352.00	36.00	1,301.00	....	2.06	M. J. Beach	Aug. 10, 1916 (88).
Lombard street	3 ft. E. of E. C. L. Hopkins Place.	5 ft. W. of W. C. L. Hanover st.	Granite blocks.	400.00	39.00	1,753.00	3.64	3.50	W. M. Elder	June 12, 1916.
†Lombard street	E. B. L. South street	W. B. L. Gay street	Granite blocks.	80.05 304.45 150.55	54.50 76.50 35.30	3,620.21	....	3.53	Geo. Long Contracting Co.	Dec. 17, 1918.
†Lombard street	E. B. L. Fremont street	W. B. L. Paca street	Sheet asphalt	1,591.20	38.97	6,275.60	3.00	1.74 1.69	Warner-Quinlan Asphalt Co.	Aug. 27, 1918 (13-11).
†Lombard street	E. B. L. Chester street	W. B. L. Patterson Park avenue.	Sheet asphalt	833.05	36.20	39.40 3,344.10	2.25	1.74	Warner-Quinlan Asphalt Co.	Feb. 19, 1918 (84-119).
†Lombard street	W. B. L. Chester street	E. B. L. Washington street	Bit. concrete	423.35	36.12	1,748.62	....	1.38	Filbert Pav. & Const. Co.	July 23, 1918 (132).
‡Longwood street	S. B. L. North avenue	N. B. L. Westwood avenue	Bit. concrete	273.00	39.60	1,144.00	....	1.24	F. E. Schneider Paving Co.	Aug. 12, 1918.
Lovegrove alley	N. C. L. Preston street	S. B. L. Mt. Royal avenue	Vitrified blocks.	276.40	20.00	582.00	....	2.35	P. F. Reddington	Aug. 13, 1914.
Lovegrove alley	N. C. L. Adams alley	S. B. L. North avenue	Vitrified blocks.	180.00	12.00	244.00	....	2.20	Thomas Mullan	July 5, 1915.
†Low street	S. B. L. East street	W. B. L. Aisquith street	Vitrified blocks.	767.75	19.50	1,694.66	....	2.09	Consolidated Eng. Co.	Sept. 17, 1918 (23).
Luzerne street	N. C. L. Federal street	S. B. L. Baltimore Cemetery	Vitrified blocks.	213.00	42.00	1,054.00	....	2.02	M. J. Beach	May 23, 1916.
McCulloh alley	N. C. L. Bloom street	S. C. L. Gold street	Vitrified blocks.	353.80	14.60	577.00	....	2.20	P. F. Reddington	July 7, 1914.
†McCulloh street	N. B. L. Lafayette avenue	S. B. L. North avenue	Sheet asphalt	3,410.15	35.85	14,393.60	2.17	1.70 1.65	U. S. Asphalt Refining Co.	Dec. 3, 1918 (37).
†McElderry street	E. B. L. Aisquith street	W. B. L. Broadway	Bit. concrete	2,007.45	39.52	9,432.88	2.20	1.40	F. E. Schneider Paving Co.	Oct. 8, 1918 (44-132).
†McElderry street	E. C. L. Duncan street	E. B. L. Milton avenue	Sheet asphalt	1,358.65	39.40	6,448.60	2.25	**.74	Warner-Quinlan Asphalt Co.	Feb. 19, 1918 (80-119).

IMPROVED PAVEMENTS UNDER GUARANTY, JANUARY 1, 1914.—Continued

Street.	From.	To.	Pavement.	Feet in Length.	Feet in Width.	Square Yards.	Price per Yard.		Contractor.	Guaranty Expires.
							Railway Area.	Outside Area.		
†McMechen street	S. B. L. Park avenue	W. side Malster avenue	Vitrified blocks.	868.20	38.70	3,779.91	2.40	2.20	Standard Contracting Co.	Dec. 17, 1918 (60).
Madison street	E. B. L. Luzerne street	West side Grove alley	Vitrified blocks.	984.50	39.60	4,881.00			Frank Novak	Aug. 13, 1916 (108).
Madison street	E. B. L. Greenmount avenue	W. B. L. Central avenue	Vitrified blocks.	1,594.43	39.08	871.65 6,227.02	2.08 3.50	2.08	David M. Andrew Co.	Feb. 12, 1918 (125).
†Madison street	E. B. L. Broadway	W. B. L. Patterson Park avenue.	Sheet asphalt.	2,487.70	39.49	11,886.00	2.30	**.77	P. Flanigan & Sons	July 23, 1918.
†Madison street	W. B. L. Charles street	W. B. L. Cathedral street	Bit. concrete	348.85	38.95	1,584.00		1.53	Filbert Pav. & Const. Co.	July 23, 1918 (132).
†Madison street	E. B. L. Gay street	W. B. L. Broadway	Sheet asphalt.	1,497.40	38.80	7,013.54	2.35	1.74	Filbert Pav. & Const. Co.	Aug. 27, 1918 (7).
†Madison street	W. B. L. Constitution street	W. B. L. Greenmount avenue	Granite blocks.	66.00 177.45 410.75	31.70 29.50 37.10	2,744.30		3.45	P. F. Reddington	Sept. 24, 1918.
‡Malakoff street	E. B. L. Washington street	W. B. L. Chester street	Bit. concrete	424.00	24.00	1,048.00		1.24	Elder Pav. & Contr. Co.	Aug. 12, 1918.
Marion street	E. C. L. Howard street	W. B. L. Park avenue	Granite blocks.	379.60	20.00	860.00		3.65	B. F. Sweeten & Sons	Sept. 5, 1915.
†Mason alley	N. B. L. Preston street	S. B. L. Hoffman street	Vitrified blocks.	328.50	11.67	431.40		1.90	Consolidated Eng. Co.	July 16, 1917.
‡Mason alley	N. B. L. Ducatel street	S. B. L. Whitelock street	Vitrified blocks.	596.00	20.00	1,286.00		2.07	P. Flanigan & Sons	Sept. 25, 1918.
†Milton avenue	N. B. L. Baltimore street	S. B. L. McElderry street	Sheet asphalt.	2,035.10	41.92	10,022.30		**.74	Warner-Quinlan Asphalt Co.	Feb. 19, 1918 (79).
*Mondawmin avenue	W. B. L. Auchentoroly Terrace	800 ft. westward	Sheet asphalt.	800.00	66.00	6,434.00		1.80	W. M. Elder	Dec. 7, 1914 (100).
Monroe street	N. F. R. Columbia avenue	Bridge over B. & O. R. R.	Granite blocks.	1,833.30	39.60	8,170.00		3.65	P. Flanigan & Sons	Aug. 21, 1914.
†Monroe street	S. B. L. Eagle street	Bridge over B. & O. R. R.	Vitrified blocks.	390.40	38.90	1,695.21		2.15	Geo. Long Contracting Co.	Sept. 10, 1918.
§Monroe street	S. C. L. Wilkens avenue	S. C. L. Eagle street	Bit. concrete	306.30	20.00	680.68		.90	F. E. Schneider Paving Co.	Oct. 2, 1918.
†Montford avenue	N. B. L. Baltimore street	S. B. L. McElderry street	Sheet asphalt.	2,032.60	41.86	10,116.70		**.74	Warner-Quinlan Asphalt Co.	Feb. 19, 1918 (79).
†Monument street	Fallsway	W. B. L. Ensor street	Granite blocks.	1,544.65	39.20	7,041.24		3.12	Cunningham Pav. & Con. Co.	Jan. 14, 1919 (57).
Morton street	S. C. L. Centre street	N. C. L. Hamilton street	Vitrified blocks.	224.80	12.00	302.00		2.18	D. V. Ault & Co.	July 21, 1915.
†Mosher street	E. B. L. McCulloh street	W. B. L. Park avenue	Bit. concrete	1,547.22	38.50	6,973.98		1.45	Elder Pav. & Contr. Co.	Feb. 12, 1918 (126).
†Mosher street	E. B. L. Park avenue	W. B. L. Mt. Royal avenue	Bit. concrete	705.60	39.04	3,260.44		1.25	Eastern Paving Co.	Dec. 3, 1918 (41).
†Mount street	N. B. L. Riggs avenue	S. B. L. Laurens street	Bit. concrete	723.10	39.40	3,197.80		1.40	P. Flanigan & Sons	July 23, 1918 (131).
†Mt. Vernon Place	W. B. L. St. Paul street	E. B. L. Charles street	Vitrified blocks.	335.50 338.35	31.42 31.59	2,361.74		2.02	Geo. Long Contracting Co.	Sept. 10, 1918.
Mulberry street	W. B. L. Payson street	W. B. L. Pulaski street	Sheet asphalt.	397.00	30.00	1,386.52		1.74	W. M. Elder	Nov. 25, 1917.
†Mulberry street	W. B. L. Fulton avenue	E. C. L. Monroe street	Sheet asphalt.	447.45	30.15	1,526.00		1.65	U. S. Asphalt Refining Co.	Dec. 3, 1918.
‡Newington avenue	E. B. L. Park avenue	W. B. L. Mt. Royal Terrace	Bit. concrete	303.00	39.60	1,351.00		1.35	F. E. Schneider Paving Co.	Jan. 10, 1918.
North avenue	E. C. L. Payson street	E. F. R. Druid Hill avenue	Sheet asphalt.	3,057.30	60.00	16,195.00		1.69	F. E. Schneider Paving Co.	Aug. 22, 1915 (91).
†North avenue	E. C. L. Payson street	E. B. L. Twelfth street	Bitulithic	6,850.00	60.00	47,331.00	3.20	2.23	Warren Bros. Co.	June 30, 1914 (89).
North avenue	E. B. L. Washington street	W. C. L. Gay street	Sheet asphalt.	1,754.00	60.00	12,137.00	2.08	1.99	Filbert Pav. & Const. Co.	Jan. 28, 1914.
‡Oak street	N. B. L. Twenty-sixth street	N. B. L. Twenty-seventh street	Bit. concrete	462.00	39.60	2,042.0		1.24	Elder Pav. & Contr. Co.	Aug. 12, 1918.
‡Oak street	N. C. L. University Parkway	S. B. L. Mallory lane	Bit. concrete	1,504.00	30.00	4,796.00		1.45	P. Flanigan & Sons	Sept. 27, 1918.
O'Donnell st. (S. Side).	E. C. L. Kenwood avenue	W. C. L. Ellwood avenue	Vitrified blocks.	1,171.70	30.00	4,159.00		2.18	P. F. Reddington	July 30, 1914.
O'Donnell st. (N. side).	E. C. L. Kenwood avenue	E. B. L. Ellwood avenue	Vitrified blocks.	1,222.00	30.00	5,405.00	2.09	2.00	M. J. Beach	July 15, 1916.
†Oliver street	E. B. L. Ensor street	S. B. L. Lamont avenue	Bit. concrete	691.30 105.55	29.96 39.35	3,004.32		4.90	Warner-Quinlan Asphalt Co.	Nov. 12, 1918 (33).
†Oliver street	E. B. L. Guilford avenue	W. B. L. Greenmount avenue	Bit. concrete	906.45	39.35	4,201.99		1.25	F. E. Schneider Paving Co.	Oct. 8, 1918 (132).
‡Orem avenue	E. B. L. Reisterstown road	E. B. L. Parkwood avenue	Sheet asphalt.	526.00	24.00	5,959.00		1.52	F. E. Schneider Paving Co.	Nov. 14, 1917.
†Orleans street	E. B. L. Patterson Park avenue.	W. B. L. Milton avenue	Sheet asphalt.	665.85	39.40	3,103.37		**.93	Filbert Pav. & Const. Co.	Feb. 12, 1918 (127-129).
Ostend street	W. C. L. Race street	W. C. L. Hanover street	Vitrified blocks.	463.50	39.20	2,108.00	2.22	2.03	D. V. Ault & Co.	July 5, 1915.
Oliver street	E. B. L. Caroline street	W. B. L. Broadway	Sheet asphalt.	840.00	39.00	4,009.00		1.74	W. M. Elder	Sept. 8, 1916.
Oliver street	W. B. L. Caroline street	Alley E. Central avenue	Sheet asphalt.	527.20	39.40	2,444.00		1.89	F. E. Schneider Paving Co.	Aug. 24, 1914.
†Oliver street	E. F. R. Mt. Royal avenue	W. C. L. alley west of Md. ave.	Granite blocks.	245.45	39.70	1,165.20		2.97	Cunningham Pav. & Con. Co.	Sept. 4, 1917.
†Paca street	S. B. L. Baltimore street	N. B. L. Pratt street	Granite blocks.	1,025.40	48.60	5,704.30	3.15	3.15	John E. Quinn	Dec. 6, 1917.
Park avenue	S. F. R. Lexington street	N. F. R. Fayette street	Granite blocks.	353.60	36.10	1,318.00	3.72	3.72	P. Flanigan & Sons	Oct. 23, 1914.
†Park avenue	N. B. L. Lafayette avenue	N. B. L. McMechen street	Sheet asphalt.	740.10 8.50	38.50 123.00	4,046.73	2.25	1.65	U. S. Asphalt Refining Co.	Dec. 3, 1918 (39-76).
†Park avenue	S. B. L. Lanvale street	S. B. L. Lafayette avenue	Sheet asphalt.	399.20	38.80	1,753.17	2.10	1.68	F. E. Schneider Paving Co.	July 23, 1918 (134).
Park Terrace	E. C. L. Robert street	W. C. L. Park avenue	Vitrified blocks.	585.00	35.00	2,338.00		2.09	P. F. Reddington	April 15, 1916.
‡Parkwood avenue	N. C. L. Fulton avenue	S. C. L. Orem avenue	Sheet asphalt.	877.00	24.00	2,849.00		1.52	F. E. Schneider Paving Co.	Nov. 14, 1917.
†Patterson Park avenue.	S. B. L. Pratt street	S. B. L. Preston street	Sheet asphalt.	5,480.45	41.80	25,571.29	2.20	2.20 1.62	F. E. Schneider Paving Co.	Oct. 8, 1918 (43).
Patuxent street	N. B. L. Canton street	S. B. L. Fait avenue	Vitrified blocks.	812.20	36.00	3,609.00		1.94	Geo. Long Contracting Co.	Dec. 24, 1915 (88).
Payson street	N. F. R. Baltimore street	N. C. L. Fayette street	Sheet asphalt.	479.10	38.80	2,219.00		1.99	F. E. Schneider Paving Co.	July 12, 1914.
‡Payson street	S. B. L. North avenue	N. B. L. Westwood avenue	Bit. concrete	274.00	39.60	1,139.00		1.24	F. E. Schneider Paving Co.	Feb. 26, 1918.
*Penhurst avenue	W. B. L. Garrison avenue	Western city limits	Vitrified blocks.	1,172.00	36.00	4,718.00		2.05	P. Flanigan & Sons	Dec. 12, 1914 (94).
*Pen Lucy avenue	E. B. L. Old York Road	W. B. L. Lowndes avenue	Vitrified blocks.	688.00	16.00	1,322.00		2.14	W. M. Elder	Oct. 29, 1914.
†Penn street	S. B. L. German street	N. B. L. Pratt street	Sheet asphalt.	718.10	32.70	2,688.00	2.20	1.74	Warner-Quinlan Asphalt Co.	Aug. 27, 1918 (14).
†Perry street	W. B. L. Light street	E. C. L. Charles street	Granite blocks.	311.00	12.30	435.00		3.95	P. F. Reddington & Sons	Aug. 11, 1914.
†Perry street	E. B. L. Bedford street	W. F. R. Charles street	Granite blocks.	159.20	18.20	315.66		3.39	P. F. Reddington & Sons	Jan. 15, 1918.
Philadelphia road	E. C. L. Luzerne street	Eastern city limits	Vitrified blocks.	2,311.00	30.00	10,784.00		2.10	Geo. Long Contracting Co.	Oct. 13, 1915.
†Pine street	S. B. L. Saratoga street	N. B. L. German street	Sheet asphalt.	1,394.92	30.10	4,921.70	3.50	2.10	Warner-Quinlan Asphalt Co.	Aug. 27, 1918 (16).

IMPROVED PAVEMENTS UNDER GUARANTY, JANUARY 1, 1914.—Continued

Street.	From.	To.	Pavement.	Feet in Length.	Feet in Width.	Square Yards.	Price per Yard.		Contractor.	Guaranty Expires.
							Railway Area.	Outside Area.		
†Wilson street	E. B. L. Madison street	W. B. L. Eutaw street	Sheet asphalt	294.53	39.39	1,342.90	....	1.55	Balto. Asph. Blk. & Tile Co.	Dec. 31, 1918.
Wilson street	E. F. R. Bolton street	W. B. L. Park avenue	Sheet asphalt	282.20	38.20	1,258.00	....	1.99	F. E. Schneider Paving Co.	June 2, 1914.
‡Windsor avenue	E. B. L. Garrison avenue	W. B. L. Hilton street	Sheet asphalt	690.00	32.00	2,459.00	....	1.59	F. E. Schneider Paving Co.	Oct. 15, 1917 (109).
‡Woodbrook avenue	N. C. L. Fulton avenue	S. B. L. Ruskin avenue	Sheet asphalt	676.00	24.00	1,870.00	....	1.52	F. E. Schneider Paving Co.	Nov. 14, 1917.
Wolfe street	N. B. L. Monument street	S. B. L. Jefferson street	Sheet asphalt	833.30	41.80	3,891.00	2.15	1.86	Filbert Pav. & Const. Co.	Dec. 21, 1914.
Totals				358,300.28	....	1,472,341.96	....	....	....	....

1. Sheet asphalt over cobble stone, except Chester street, between Jefferson street and McElderry street, which is to be sheet asphalt on a concrete base.
2. Omit intersection at Frederick street.
3. Omit intersections at Lombard, Baltimore and Fayette streets.
4. Concrete base at Wolfe street.
5. Omit intersection at Greenmount avenue.
6. Omit intersection at Aisquith and Gay streets.
7. Railway area at Caroline street to be vitrified block.
8. Intersection of Monument street to be granite block, 6-inch concrete base; intersection of Madison street to be vitrified block, 6-inch concrete base.
9. Omit intersection of Eager street; sheet asphalt, 6-inch concrete base, between curb and rails; vitrified block, 6-inch concrete base, between rails.
10. Intersection of Madison street to be vitrified block on 6-inch concrete base; intersection of Ashland avenue to be sheet asphalt on a 6-inch concrete base; from north side of Madison street to the south side of Ashland avenue to be sheet asphalt on cobble.
11. Vitrified block between outer rails of railway tracks, 6-inch concrete base.
12. Omit intersection of Biddle street and Preston street.
13. Omit intersection at Greene street.
14. Omit intersection at Lombard street; railway tracks to be vitrified block on 6-inch concrete base.
15. Omit intersections at Oliver street, Chase street, Gay street, Biddle street, Eager street and Preston street; vitrified block between outer rails.
16. Omit intersections at Lexington street and Baltimore street; granite block in railway area of intersection of Fayette street.
17. Omit intersections at Davis street and Holliday street.
18. Omit intersection at Lee street.
19. Omit intersection at Water street.
20. Omit intersection at Hillen street.
21. Omit intersections at Hillen street, Gay street and Ensor street.
22. Omit intersection at High street.
23. Omit intersection at Forrest street.
24. Omit intersections at Aisquith street, Harford avenue and Broadway; granite block between outer rails, Bond street to Broadway.
25. Omit intersection at Charles street.
26. Include intersection of Plowman street.
27. Omit intersection at Lombard street.
28. Omit intersection at Greene street.
29. Intersection of Baltimore street to be paved with granite block, 6-inch concrete base, bituminous filler.
30. Omit west half of Central avenue from N. B. L. Pratt street to N. B. L. Granby street and east half from S. B. L. Granby street to N. B. L. Fayette street; omit intersections of Baltimore street, Gay street, Chase street and Preston street; street railway area to be vitrified block, 6-inch concrete base; steam railway area to be granite block, 6-inch concrete base.
31. Omit intersections at Lamont avenue, Harford avenue, Bond street, Aisquith street and Caroline street.
32. Omit intersections at Harford avenue, Bond street and Caroline street.
33. Omit intersections at Aisquith street, Harford avenue and Central avenue.
34. Omit intersections at Biddle street and Preston streets.
35. Omit intersections at Hoffman street, Biddle street and Preston street.
36. Omit intersection at Bolton street.
37. Intersection of McMechen street to be vitrified block.
38. Omit intersections at Orleans street and Jefferson street; intersection of Monument street to be vitrified block.
39. Intersection of McMechen street to be vitrified block.
40. Omit intersections at Preston street and Hoffman street; vitrified block, cement filler, between outer rails.
41. Vitrified block gutters to be used as directed by Chief Engineer.
42. Omit intersection at John street.
43. Omit intersections at Lombard street, Baltimore street, Orleans street, Fayette street, Jefferson street and McElderry street.
44. Omit intersection at Central avenue.
45. Omit intersection as Pearl street; granite block between Pine street and Paca street to be redressed and reset with bituminous filler, 6-inch concrete base.
46. Omit intersections at Twenty-seventh street, Twenty-eight street and Twenty-ninth street.
47. Omit intersection at Forest Park avenue.
48. Omit intersection at Callaway avenue.
49. Omit intersection at Oakfield avenue.
50. Omit intersection at Twenty-ninth street.
51. Omit intersection at Twenty-seventh street.
52. Omit intersection at Windsor Mill road.
53. Omit intersection at Hampden avenue.
54. Base is top of drainage tubs and not included in price.
55. Omit intersection of Lexington street.
56. Omit intersection of Hillen street.
57. Omit intersections of Greenmount avenue and Harford avenue.
58. Vitrified block gutters and crossings to be used at the discretion of Chief Engineer.
59. Vitrified block on 6-inch concrete base, cement filler, between outer rails; sheet asphalt on concrete base in dummy between W. B. L. Lawrence street and Fort McHenry Gate.
60. Eastern terminus of this paving on McMechen street will be at W. B. L. Malster avenue; omit intersection of Mt. Royal avenue.
61. Omit intersection of Lafayette avenue; wire-cut lug blocks to be used at discretion of the Chief Engineer.
62. Omit intersections of Druid Hill avenue, McCulloh street and Madison avenue.
63. Omit intersections of McCulloh street, Madison avenue and Eutaw Place.
64. Omit intersection of McCulloh street.
65. Sheet asphalt on concrete base in railway area, between N. B. L. Lafayette avenue and S. B. L. North avenue; omit intersections of Lanvale street, Lafayette avenue, Mosher street and McMechen street.
66. Omit intersections of Charles street, St. Paul street, Calvert street and Guilford avenue; vitrified block on 6-inch concrete base with cement filler between outer rails; wood block stretchers along outer rails adjacent to sheet asphalt paving.
67. Intersections of Harford avenue and Aisquith street to be included in this contract.
68. Omit intersections of Oliver street and Lafayette avenue.
69. Omit intersection of Chase street.
70. Intersection of Franklin street to be old granite block, 6-inch concrete base, bituminous filler.
71. Pave west half of Central avenue, from S. B. L. Fawn street to N. B. L. Pratt street, granite block, 6-inch concrete base, cement filler, except in railway area, which is to be bituminous filler; pave west half of Central avenue, from N. B. L. Pratt street to N. B. L. Granby street; pave east half of Central avenue, from S. B. L. Granby street to N. B. L. Fayette street; vitrified block on 6-inch concrete base with cement filler, except railway area to be granite block, 6-inch concrete base, bituminous filler. The limits of this contract to include that part of Central avenue not included in Contracts 26 and 27.
72. Vitrified block Valley gutters and 6-inch armored concrete curb.
73. Macadam base furnished by City Engineer's Department.
74. Sheet asphalt, concrete base, in railway area from S. B. L. Preston street to a point 72.5 feet south of southwest corner of Eager Place; vitrified block on 6-inch concrete base and cement filler between outer rails elsewhere, also intersections of Fairmount avenue and Monument street.
75. Vitrified block, 6-inch concrete base and cement filler, between outer rails at intersection of Caroline street.
76. Vitrified block, 6-inch concrete base, between outer rails.
77. Intersection of John street to be sheet asphalt, with vitrified block between outer rails.
78. Intersection of Monument street to be vitrified block on 6-inch concrete base.
79. Intersection of Fairmount avenue and Fayette street to be vitrified block, 6-inch concrete base.
80. Intersection of Patterson Park avenue to be sheet asphalt, with vitrified block on 6-inch concrete base between outer rails.
81. W. B. L. Frederick street to E. B. L. Gay street to be vitrified block, 6-inch concrete base; E. B. L. Frederick street to W. B. L. Market Place to be granite block, 6-inch concrete base, bituminous filler.
82. Omit west half of Central avenue, S. B. L. Fawn street to N. B. L. Pratt street.
83. Omit intersection at Oliver street; Federal street railway area to be vitrified block.
84. Include paving of Patterson Park avenue, from southwest to northwest building line of Lombard street.
85. Area of Presstman street, from E. C. L. Linden avenue to S. B. L. North avenue, in included.
86. Area of Willian street, from southeast to northeast building line of Hamburg street, is included in total area.

IMPROVED PAVEMENTS UNDER GUARANTY, JANUARY 1, 1914.—Concluded

87. Area of Central avenue, from S. B. L. to E. C. L., is included in total area; also paving of Oliver street, from W. B. L. Harford avenue to E. B. L. Central avenue.
88. Paved under private contract.
89. Granite blocks in railway area.
90. Except intersection of Roland avenue.
91. Cobble in railway area.
92. From Taylor street to Valley street paved with granite blocks, also railway area.
93. Guaranty expires: Liberty Heights avenue to northern city limits, February 15, 1914; Liberty Heights avenue to Liberty road, November 24, 1914.
94. Except intersection of Granada avenue.
95. Paved for C. E. Spalding Company.
96. Except intersection of Charles street.
97. Except intersections of Charles street, St. Paul street and Calvert street.
98. Except St. Paul street car tracks; granite blocks in railway areas.
99. Formerly Harrison street.
100. Two driveways, each thirty-three feet wide, with parkway in center.
101. Under ordinance.
102. See Remington avenue and First avenue
103. Omit intersection at Chase street.
104. Omit intersection at Howard street.
105. Repaved by City Engineer.
106. Except intersection with Hollins street; Bl-Bl in old pavement.
107. Paving on left half extends to line, five feet west of E. C. L. Garrison avenue.
108. Paved under private contract (Ordinance No. 125, 1912).
109. Except intersection with Denison street; included in Denison street (Contract Bl-Bl).
110. Include 15-foot alley, from N. C. L. Keyworth street to S. B. L. Old Pimlico road.
111. Streets completed, but contract incomplete.
112. Omit intersections at Preston street and Lamont avenue.
113. Omit intersection at Gay street.
114. Omit intersections at Greenmount avenue, Central avenue and Federal street; railway area to be vitrified block.
115. Omit intersection at Wilson street; intersection of McMechen street to be vitrified block; between rails at Caroline street to be vitrified block.
116. Outside area includes vitrified block gutters.
117. Omit intersections at Madison street, McElderry street and Jefferson street.
118. Omit intersection at Forrest street.
119. Outside area includes vitrified block gutters.
120. Omit intersections at Preston street and Chase street; Federal street railway area to be vitrified block.
121. Omit intersections at Aisquith street, Harford avenue and Central avenue.
122. Includes vitrified block alleys and gutters.
123. Omit intersections at Oliver street and Lanvale street.
124. Omit intersection at Montford avenue.
125. Omit intersections at Harford avenue, Ensor street and Aisquith street.
126. Omit intersections at Madison avenue, Eutaw Place and Linden avenue.
127. Omit intersection of Montford avenue.
128. Omit intersection at Brevard street.
129. Work done by surface heater method, no base laid.
130. Paving between outer rails at intersections of Mosher street and Division street to be vitrified block.
131. Vitrified block gutters and crossings to be used at the discretion of the Chief Engineer.
132. Include vitrified block gutters.
133. Omit intersection at Lombard street.
134. Vitrified block to be used between outer rails, with wood block liners.
135. Omit intersections at Lafayette avenue, McMechen street and Wilson street.
136. Include west intersection at Charles street; omit intersection at Hanover street.
137. Omit intersection at Central avenue.
138. Omit intersection at Penn street.

**Price given is for asphalt topping only, binder put in by tons and base by cubic yards.

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*Streets paved by Annex Commission.
†Streets paved by Paving Commission.
‡Streets paved by Commissioners for Opening Streets.
§Streets paved by Division of Street Repairs.
NOTE—Gutters included in total areas.

REPORT OF

J. W. OGIER, *Assistant Engineer*

SUB-DIVISON OF BRIDGES

Report of J. W. Ogier, Assistant Engineer
1913

BALTIMORE, January 24, 1914.

MR. H. K. MCCAY, *City Engineer.*

DEAR SIR—I beg to submit the following report of the operations of the Division of Bridges and Grades for the year ending December 31, 1913. This includes the following:

Maintenance of existing bridges and culverts, the erection of new structures and design, and construction of improvements and additions. The record of street grade establishments, the inspection of maintenance of improved pavements during guarantee period.

The supervision on the part of the city of the work undertaken by the Baltimore and Ohio Railroad Company in accordance with the terms of the Grade-Crossing Elimination Ordinance No. 387, approved August 16, 1909.

Supervision of Nanticoke street material storage lot. Operation of stone-crushing plant, converting refuse cobble and other stone into suitable forms of crushed stone for use in construction work of the Department.

Considerable work of a miscellaneous character was done and charged to the account of Repairs of Roads and Streets.

WORK DONE FOR ACCOUNT OF REPAIRS OF ROADS AND STREETS

Nanticoke Street Storage Lot No. 2.

This was used for the receipt, storage and distribution of paving materials, in addition to stone-crushing operations; a watchman was employed and such forces as were needed from time to time; expenditures on account of handling old materials, including hauling, amounted to $3,776.90.

In addition to handling of paving materials, the ironwork taken from the Baltimore and Lexington street bridges over Jones Falls, consisting of plate girders, floor plates, brace, frames, etc., which it was deemed advisable to retain rather than dispose of them as old iron, was stored here either for future use by this Department or for disposition at a price commensurate with their value as fabricated members.

Miscellaneous expenditures: A lattice screen was erected on the north building line of North avenue, the full width of Mount Royal Material Storage Lot, in order to render its appearance less unsightly. An arched entrance eighteen feet wide was provided and vines were planted which will eventually cover the entire lattice work.

A wood fence was erected surrounding Ashland avenue lot also, with the intention of improving its appearance. Charges arising on account of maintenance of improved pavements under guarantee were also made against this account.

STATEMENT OF EXPENDITURES.

Carpentry work in office	$32 52
Cement	17 02
Draughting room and field supplies	5 65
Hauling	2.696 44
Hardware, tools, etc	115 18
Incidentals, miscellaneous, etc	55 90
Inspecting improved pavements under guarantee	1,227 00
Labor, as per pay rolls	7,984 58
Lime	1 00
Lumber	2,783 51
Motorcycle, accessories, etc	592 37
Office supplies	22 75
Paints, oils, brushes, coal tar, etc	159 13
Repairs to improved pavements under guarantee	734 68
Sand	8 40
Stone crushing	10.509 06
Surveys and grades	112 00
Total	$27,057 19

There had been a considerable accumulation of useless cobble, gutter, curb and flag stone, etc., on the Ashland avenue and Nanticoke street material storage lots, due to substitution of improved paving for cobble, which it was deemed advisable to crush for general construction purposes. A contract was executed by this Department and Clarence M. Morfit for this purpose, and the following work done thereunder at a cost of 95 cents per ton for crushing.

At Ashland avenue lot, 4,132.5 cubic yards were crushed.

At Nanticoke street lot, 4,434 cubic yards. A considerable quantity of this stone has been used during the year for various purposes and charged accordingly.

There remains in stock for further use as needed, 3,142.3 cubic yards; at Ashland avenue lot and at Nanticoke street lot, 1,598.1 cubic yards.

Grade-Crossing Elimination Under Ordinance No. 387, Approved August 16, 1909.

The past year has been the most active, and more actual construction work has been completed than in any other year since the passage of the ordinance.

The Ostend Street Viaduct was finished and opened to traffic November 26. This bridge now provides the connecting link in a continuous highway along the water front without any obstruction by railroad tracks, and at the same time connecting with improved smooth pavements Ridgely street, an arterial highway for Southwest Baltimore; and Hanover street, bearing a similar relation to South Baltimore.

The approaches beginning at Sharp street on the east and Warner street on the west, consist of gravity concrete retaining walls, in the case of the west approach being founded on sand and gravel, and the east approach on a wood-pile bearing. The roadways of both approaches are paved with granite block paving on a concrete base laid over compacted earth fills.

The bridge spans extending from the west building line of Eutaw street to the east building line of Howard street are of the plate girder construction, with the floor systems of reinforced concrete supported by transverse "I" beams, and paved with granite block wearing surface. The spans vary from about fifty to one hundred feet. They are supported by iron columns and piers, having in all cases wood-pile bearings in foundation. The roadway is 21 feet wide and a reinforced concrete footway ten feet wide is suspended along the south side.

Construction work began on August 14, 1912. It was somewhat impeded in the beginning by the necessity for a revision of the plans, due to the fact that difficult foundation problems were encountered; a large part of the area occupied by the foundations of the structure having been, at one time, reached by tidal waters, and consisted largely of an alluvial deposit.

Charles F. King & Co., of Philadelphia, Pa., contracted with the Baltimore and Ohio Railroad Company to build the structure The work proceeded under the supervision and direction of the City Engineer, as per the terms of Ordinance No. 387 above. The cost of the completed structure is approximately $165,000.

Baltimore city, upon acceptance of the bridge, acquired absolute title, with responsibility for maintenance of the two approaches. The title and maintenance of the bridge spans remains with the Baltimore and Ohio Railroad Company.

Before construction work began on this structure, Ostend street (formerly Stockholm street), was not graded or paved between China street and Ridgely street, although the street bed was owned by the city. The City Engineer, realizing the desirability of opening this thoroughfare, which will considerably shorten hauls in this vicinity, and at the same time increase the efficiency of the bridge, proceeded to grade, out of available funds, this portion of the street. It is expected that the opening of this bridge and street and the co-related improvements in connection therewith will prove of immense value to South Baltimore.

The Ordinance of Estimates for 1913 appropriations carried an amount of $25,000 for regrading, repaving and other miscellaneous work incidental to the construction of the Ostend street bridge, necessary in the adjacent streets.

Out of this fund the work mentioned above was done, and in addition a 30-foot street along the south side of the east approach was opened between Howard street and Plum alley to serve the business which would otherwise be hampered by the closing of Plum alley and the present Stockholm street.

In order to provide adequate clearance under the span crossing Howard street the intersection was lowered two feet and Howard street to north and south, as far as change was made, was repaved with granite blocks, taken from Hanover street, on a six-inch concrete base, as also was Ostend street; both north and south driveways from Howard street to Plum alley.

Work was also begun on the Lee Street Viaduct. The Vang Construction Company of Cumberland, Md., contracted the work on the two approaches in Creamer alley and Little Greene street. The American Bridge Company erected the steel work of the bridge spans and the McLean Construction Company executed the concrete work and the granite block paving in the driveway, and the reinforced concrete footway suspended on brackets along the south side of the bridge.

In general design, the spans and approaches are similar to those on Ostend Street Bridge described above. The work on this structure has proceeded expeditiously, and provided favorable weather prevails will be completed about January 15, 1914.

In addition to checking the plans and making adjustments, arising on account of the construction for which the city was responsible, this Division maintained active inspection of the field work.

The resultant work on both these structures was creditably executed and is of pleasing workman-like appearance. Plans were approved for the construction of the Cross Street Viaduct also, which is to be built on the north side of the street, from Sharp street to Warner street.

The grade of this structure, as laid down in Ordinance No. 387, calling for a rate of grade of 4 per cent. on the approaches, entailed so much costly reconstruction of existing streets in order to provide adequate clearance at Howard and Eutaw streets, that it was deemed advisable to increase the rate of grade to a maximum of 5 per cent. A new grade was accordingly adopted and validated by passage of a new ordinance, No. 320, approved July 16, 1913.

The Baltimore and Ohio Railroad Company are ready to proceed with the construction along these lines, and only await certain legal adjustment, involving the securing to owners of property involved, resultant damage thereto.

INSPECTION AND MAINTENANCE OF IMPROVED PAVEMENTS UNDER GUARANTEE.

The rapid increase in number of improved pavements under guarantee by recent construction activities of this Department, the Paving Commission and the Commissioners for Opening Streets have greatly increased the work herein involved, and compels clearer definition of policy as to many points involved.

One of the most material questions involved is the question of responsibility for failure of pavements within the area of the tracks of the United Railways and Electric Company. The presence of the tracks and their form of construction with inadequate foundation and drainage is undoubtedly the cause of serious damage in many cases within and outside the railway area.

The failure of guarantors to comply promptly with notification to restore areas opened by authority of permits or made necessary by failure, should be corrected at once and some penalty imposed for failure to comply with the terms of their contracts in this respect.

A large percentage of the work made necessary by failure, and which should be restored by the guarantors, is now of necessity executed by the forces of this Department and the cost billed against them. The collection of the bills for this work should be pushed and the liability of the bonds for the amounts discovered promptly. Any contractor persistently failing to comply with the terms of the contract in this respect should be declared an irresponsible bidder.

I desire again to recommend that a stringent specification be adopted controlling the backfilling of trenches, and that more efficient inspection be provided to compel compliance at the expense of the agency making the opening.

On January 1, 1914, the pavements under guarantee and in the control of this Department constituted 1,374,532.8 square yards with a total length of 64.99 miles, as against 851,427.46 yards with a length of 39.32 miles on January 1, 1913.

During the year the guarantee expired on 216,847 square yards with a mileage of 8.68. The amount received for maintenance from all sources during the year was 739,952.34 square yards with a length of 34.35 miles.

Grade Establishments.

Following is a statement of expense of establishments and re-establishments:

Appropriation		$5,000 00
Amount paid by applicants for establishments		1,783 02
		$6,783 02

Expenditures.

Amount paid City Surveyor	$4,027 00	
Amount paid for advertising	658 93	
Rebates on bills rendered	57 86	
Labor, as per pay roll	632 00	
Grade book and stationery	99 00	
		5,474 79

Grade establishments to the number of 255 were requested by this Department, checked upon receipt from City Surveyor, the profiles plotted and records completed.

The number of squares established was 427 and the total length equals 25.87 miles.

As evidenced again this year, a source of much expense to the city and to innocent abutting property-owners involved, is the legal insufficiency of the existing laws to cover cases where owners develop property and entirely disregard grade establishments in cases of private streets. Legislation should be enacted compelling compliance with grades as established.

The city should also refuse to permit installation of conveniences until streets are properly graded in conformity with the recorded established grade. I would recommend that when the construction of a new street is finished, the grade be immediately established legally in agreement with the work as built, if there has never been an establishment made, and if the design of the street departs from an existing grade, a re-establishment should be requested. This is, in my opinion, essential to safeguard the city's rights and validate action taken to compel property-owners to adjust footways.

If this policy is not adopted now and existing discrepancies adjusted, the grade records of this office will eventually be invalidated in many cases, and can only be used with extreme uncertainty for a reference or for design of structures to be erected along streets affected. The cost involved is small, and I think any agency or interests should be required to comply as outlined above and also assume the expense of establishment.

MUNICIPAL GARAGE.

The management of the garage was recently delegated to this Division, and a scheme is being formulated looking forward to an economical and efficient administration.

It is intended to perform all the ordinary repairs at the garage and by careful inspection and prompt attention to maintain the cars so as to afford highest efficiency of operation.

The reduction in cost of supplies, accessories, materials, etc., together with the reduction in number and cost of repairs and added efficiency and availability of the cars, is expected to demonstrate conclusively the wisdom of the establishment of the garage.

The garage located at rear of the old Polytechnic Institute building, at 311 Courtland street, is equipped with ample and modern appliances, and is adequate for the cars, sixteen in number, belonging to the various departments which are now cared for there.

The present organization consists of a superintendent in charge, one washer, one polisher and a general assistant as helper on repairs, etc. When the contemplated alterations are undertaken by the Inspector of Buildings to the old school buildings, I desire to recommend that the open yard areas on north and south sides of the building in which the garage is located be covered by spanning their width without any intermediate supports, so as to provide additional space and that the entire area be regraded and repaved with concrete floor.

The policy of having the more extensive repairs made at the machine shop of the Water Department will be continued, as there is not a sufficient amount of this work to justify the more extensive organization necessary only at intervals at the garage.

If future observation disproves this, the enlargement of our repair facilities will be recommended. The cost of work done at the Water Department's machine shop will be authorized by the various departments upon recommendation of the superintendent of the garage, and billed directly against the Department, a copy of the bill being sent to this Department for the purpose of compiling a maintenance statement showing the cost of operation, etc., of the various cars, and their comparative efficiency.

All other charges, including direct and overhead, investment and depreciation, will be billed monthly against the departments.

The expenditures will be charged to account of Private Paving and Inspection as a medium for transfer. There should, however, be some fund to which charges not assessable against the departments can be charged to.

PRIVATE PAVING AND INSPECTION.

To this account was charged all expense of repaving over cuts made in improved pavements under guarantee under authority of permits issued by this Department and all other work where deposits were made by applicants for permits, also where work was done for private parties and the cost to be billed against them.

The account shows a surplus of credit largely due to the new paving rate charge of six dollars per square yard. The charges made against the account during the year were $6,723.15, and the credit invoices amount to $8,071.33.

REGRADING, REPAVING, ETC., OF HOWARD, OSTEND AND EUTAW STREETS.

This appropriation, amounting to $25,000, was provided in the 1912 Ordinance of Estimates to cover costs to city of work incidental to the construction of the Ostend Street Bridge by the Baltimore and Ohio Railroad Company under terms of the Ordinance No. 387, approved August 16, 1909.

This Division expended for grading Ostend street, between Plum alley and Warner street, inspection of construction work and other incidentals, $2,579.31.

Other expenditures from this appropriation were made by the Repair Division of this Department.

EXPENDITURES.

Labor, as per pay roll	$1,536 00
Developing and printing photographs	14 70
Blue prints	24
Surveys, marking lines, etc.	16 00
Excavating on Ostend street	911 67
Cleaning cesspool	78 40
Renewing service at No. 504 West Lee street	22 30
	$2,579 31

PAVING AND REPAIRING CROSS STREETS.

Certain charges were made against this account, of which the following is a statement:

STATEMENT OF EXPENDITURES.

Concrete protection to members of Calvert Street Bridge	$465 95
Hauling	19 05
Labor, as per pay roll	467 00
Lumber	350 94
Stone crushing	541 21
	$1,844 15

CITY FORESTER EXPENSE.

A frame building was erected to serve as a store and tool house and a field headquarters on the Mount Royal storage lot. The work was done by forces of this Division and charged to above fund. Amount expended, $333.90.

ENCASEMENT WITH CONCRETE MEMBERS OF FLOOR SYSTEM OF CALVERT STREET BRIDGE 145-FOOT 10-INCH SPAN.

On account of the inability to protect the bridge by painting, from the corrosive action of gases emanating from engine stacks on the tracks of the Pennsylvania Railroad below, it was decided to provide permanent protection to the essential members of the floor system by covering them with a protective coating of reinforced concrete.

Plans were made and specifications drawn providing for a covering of 1½ inches of reinforced concrete to be applied to the transverse floor beams and the suspending hangers of the 145-foot 10-inch bow-string truss span. An appropriation of $7,000 had been provided this year for this purpose.

On August 22, a contract was made with the David M. Andrew Company for the work at a price of $1.25 per square foot. This Company sub-let the job to the New York Cement Gun Company. The work was executed in a workmanlike manner by them, using their patented process based on the "Cement Gun."

The ironwork was first thoroughly cleaned, then after being wrapped with a wire mesh spaced about one inch from the metal surfaces, the "Gunite" was applied by the "Gun" in such a manner as to insure maximum density of concrete and insure perfect adhesion to the iron surface. This method was highly satisfactory, and with the application of a water-proofing compound (min-wax) to the surface, I am confident, insures the exclusion of all moisture and will serve as a permanent protection to the iron.

The result of the work will be to extend indefinitely the life of the structure, which was otherwise doomed to destruction.

I desire to recommend the further application of this method of protection to certain of our city bridges, which are being jeopardized by presence of similar corrosive agencies as exist at Calvert Street Bridge. The entire appropriation was expended for the work.

Maintenance of Bridges and Culverts.

The appropriation for 1913 for this account was $18,000, which being inadequate for the work planned, was augmented by transferring on September 5, $7,000 from the Emergency

Fund. The principal items of work done and charged to this appropriation were as follows:

Franklin Road Culvert.

A new culvert was erected on Franklin road, just east of the Western Maryland Railroad Company's right-of-way, to provide adequate water way for small stream crossing at this point. It was of the box type with an opening four feet by six feet in size and a length of forty-one feet three inches, having plain concrete headwalls and side walls and reinforced slab covering. Inlet gratings were placed in gutter lines at north and south sides.

Cedar Avenue Bridge.

The entire deck of this bridge was reconstructed, including new under and top floor of driveway and reconstruction of both footways with the best of the lumber taken from the driveway. Under floor is of two-inch and top floor three-inch Georgia pine.

Rayner Avenue Culvert Over Gwynn's Run.

A concrete retaining and parapet wall was erected at the south building line of the street to relieve a dangerous condition existing on the footway, and to protect the end of the arch barrel, which was considerably weakened.

A short wall was also erected on the north footway to hold up footway, and general repairs made to old masonry.

St. Paul and Calvert Street Bridges.

The old gas-lighting systems on these two bridges were expensive and inadequate. Plans were made and specifications drawn providing for wiring and installation of incandescent multiple arc system with time switches, allowing for reduction of lights at will and providing automatic control. Lights were placed on the existing posts at ends of trusses, and on viaducts and some of the rosette bases at panel points on the trusses designed to conceal connections and to add ornamentation were converted and lights here located. Immense improvement resulted in illumination as well as in the general appearance of the structures.

On September 13 a contract was made with the Kingsbury Samuels Electric Company for the work at a cost of $2,050 for St. Paul Street, and $1,750 for Calvert Street Bridge, with an amount of $80 deducted as per terms of their proposal for the awarding to them of the work on both bridges. The work on both bridges is practically finished, except for a few finishing details.

The ironwork of the Calvert Street Bridge, below the floor level, was repainted and extensive repairs made to the ironwork which was in bad condition. Ten new floor beams hangers were put in at the south end of the long span as the old ones were so badly corroded and weakened as to be dangerous. A portion of the cost of concrete encasement of floor system members was also charged to this account.

Wilkens Avenue Bridge Over Gwynn's Falls.

The top and under floors of this bridge were almost entirely renewed.

Maryland Avenue Bridge Over Jones Falls.

The old wooden deck construction of the east driveway was entirely reconstructed. Steel "I" beams were substituted for the old wooden stringers in driveway, including railway area, and an oak-block wearing surface four inches thick was laid on a three-inch Georgia pine underfloor. The blocks were grouted with bitumen filler. The United Railways and Electric Company substituted a new seven-inch girder grooved rail for the old rail. The Railways Company bore the cost of the paving within their area.

A new reinforced concrete slab, three inches thick, supported on encased steel "I" beams was substituted for the old wooden footway on the east side, including a six-inch reinforced concrete curb at roadway side.

The entire top floor of the Brunswick Street Bridge over Gwynn's Falls, at entrance to Union Stock Yards, was relaid with three-inch Georgia pine plank, and the footway was rebuilt.

The ironwork of the Lombard Street Bridge over Jones Falls was painted throughout with red oxide of iron paint, covered with a black composite base in linseed oil paint.

The footways were entirely rebuilt, and considerable work of a miscellaneous character done in addition.

All the ironwork of the Columbia Avenue Bridge over Gwynn's Falls was painted with two coats of Aetna iron paint. The footways were completely reconstructed, and other repairs made to roadways and hand-rails.

When the Fallsway work required the removal of the bridges at Lexington and Baltimore streets, and no satisfactory offer had been secured for the ironwork contained in them, it was deemed advisable to retain same with a view to future use by this Department, or to await an opportunity to dispose of them at a price commensurate with their value as fabricated members. Accordingly, this steel work was stored on the Nanticoke street lot.

The track area of the Edmondson Avenue Bridge over the Philadelphia, Baltimore and Washington Railroad Company's tracks was entirely rebuilt; new stringers of 12-inch by 12-inch Georgia pine were installed. Other repairs to roadways and footways were also made.

An incandescent lighting system on ornamental iron posts was installed on the new concrete bridge on Harford road over Herring Run.

The hand-rails of the North Avenue Bridge were painted, after being thoroughly cleaned, with one coat of red oxide of iron paint and a cover coat of Lowe Brothers' Black Metalcote.

The four corners of the head-walls of the Wilkens Avenue Culvert over Gwynn's Run were showing signs of failure and were underpinned and secured.

The head-walls of the Wilkens Avenue Culvert over Maiden Choice Run were extended in order to support the footways properly.

The roadway and footway floors of the Argyle Avenue Bridge were entirely relaid and concrete retaining walls erected at the north and south ends of the bridge.

Also various repairs were made and painting in part on bridges and culverts, other than those here mentioned, expending amounts varying from $5 to $500 on each as is shown in the tabulated statement following.

MAINTENANCE AND REPAIRS OF BRIDGES AND CULVERTS.

The work done during the year on the different bridges is given below:

Argyle Avenue Bridge.

The roadway floor of this bridge was renewed, and the best of the material taken from same used to repair sidewalks. A cement retaining wall was built on the north and south ends of bridge across roadway portion.

Charged to—

Maintenance of bridges and culverts	$223 06
Repairs of roads and streets	653 42
	$876 48

Brunswick Street Bridge.

The top roadway floor of this bridge was renewed and the best of the material removed from same was used to repair footway, also minor repairs to hand and guard railing.

Charged to—

Maintenance of bridges and culverts	$108 50
Repairs of roads and streets	1,085 16
	$1,193 66

Calvert Street Bridge.

Painted iron work under floor as follows:

Eight panels south of south pier, of 145-foot 10-inch span, painted with two coats Aetna iron paint; also shutters removed, cleaned and painted and replaced on this portion. The five panels south of the above eight were touched up in places where corrosion was bad, and then the entire surface covered with one coat of Aetna iron paint.

South Span—Painted two panels over railroad tracks with two coats of Aetna iron paint. The portion north of the north pier of the 145-foot 10-inch span was painted with two coats of Aetna iron paint.

One hundred and forty-five foot ten-inch Span—All the shutters in the span were removed, including four-foot end brackets; also sheet iron under lower chord removed and chords cleaned and painted. The buckle plates in this span were cleaned and touched up where same had been splashed with cement. Two holes were cut in the lamp pedestal on the southwest corner of the 145-foot 10-inch span. Removing all ornamental ironwork from beside lamp posts on both spans, cleaning and painting iron underneath same, also putting on 18 angles beside lamp posts where logs were broken off.

It was found that 10 of the hangers suspending the transverse floor beams on the 145-foot 10-inch span were diminished in cross-section, and before encasing same in concrete it was necessary to renew them. This work was done by the Chesapeake Iron Works.

Charged to—

Paving cross streets and repairs of roads and streets....	$1,330 03
Maintenance of bridges and culverts......................	2,386 11
	$3,716 14

Baltimore Street Bridge Over Jones Falls.

The Fallsway construction eliminated this bridge this year, and the steel work was hauled and stored for future use or sale.

Charged to—

Maintenance of bridges and culverts......................	$723 32

Centre Street Bridge.

On account of the Fallsway it was necessary to remove this bridge. This Department superintended the removing of same and disposition of old materials.

Charged to—

Maintenance of bridges and culverts......................	$43 20

Charles Street Bridge.

Minor repairs were made.

Charged to—

Maintenance of bridges and culverts......................	$0 75
Repairs of roads and streets..............................	3 60
	$4 35

Clarkson Street Box Drain.

In order to remove a source of nuisance due to defective drainage, the bed of Clarkson street was filled in between Dickman and Moale streets and a box drain was constructed to provide waterway for an existing drainage channel.

Charged to—

Maintenance of bridges and culverts	$16 12

Calvert Street Bridge.

A new incandescent electric lighting system was installed to take the place of the old gas lamps under contract with the Kingsbury-Samuels Electric Company. The following amount was expended on the partially completed contract:

Charged to—

Maintenance of bridges and culverts	$1,059 57

Caton Avenue Culvert.

Repairs to hand railing.

Charged to—

Maintenance of bridges and culverts	$37 18

Cedar Avenue Bridge.

The top and under floor of the roadway of this bridge was renewed and the best of the material removed used to repair the footways; minor repairs were made to the hand and guard rails.

Charged to—

Maintenance of bridges and culverts	$2,742 52
Repairs of roads and streets	16 00
	$2,758 52

Chase Street Bridge.

The ironwork under floor was cleaned on the second panel from east abutment all the way across bridge over the tracks of the Western Maryland Railroad, and painted with two coats of iron oxide and one coat of Metalcote. The third and fourth panels east of middle pier over Pennsylvania Railroad tracks were cleaned and painted with two coats of iron oxide and one coat of Metalcote. Minor repairs were made to roadway and footway.

Charged to—

Maintenance of bridges and culverts	$179 48
Repairs of roads and streets	296 24
	$475 72

Clipper Mill Foot Bridge.

Put in additional new stringer, entire length of bridge, and made other necessary repairs to floor and steps.

Charged to—

Maintenance of bridges and culverts	$42 65

Columbia Avenue Bridge.

Painting ironwork above and below floor with two coats of Aetna iron paint, putting in 4½-inch old curb header on west end of east and west driveways, and repairing wood block adjoining same. Repairs to hand railing, one new iron post on the southeast corner of bridge and repairing two posts on the north side with two wrought-iron straps over the tops of same, where they were cracked.

Charged to—

Maintenance of bridges and culverts	$1,358 79
Repairs of roads and streets	55 38
	$1,414 17

Cribbing at Twenty-third Street and Huntingdon Avenue.

On account of flow from street inlets at this point washing out the footway, a wooden cribbing was erected to make same safe.

Charged to—

Maintenance of bridges and culverts	$212 92

Edmondson Avenue Bridge Over Gwynn's Falls.

Cleaning expansion joints between coping blocks on top of parapet wall. It was necessary to reset many of the blocks in order to open up these joints. A fill of approximately 400 cubic yards of earth was made at the northwest corner of bridge to replace embankment washed out.

Charged to—

Maintenance of bridges and culverts	$30 96
Repairs of roads and streets	223 94
	$254 90

Edmondson Avenue Bridge Over Pennsylvania Railroad.

New 12 by 12 stringers were laid under United Railways tracks, including top and bottom floor in railway area, concrete retaining wall on east and west end of bridge entire width of railway area, repairs to guard rail and dummy. Repairs were also made on south driveway, including renewing under-floor where necessary, and replacing wood block over same.

Charged to—

Maintenance of bridges and culverts	$324 34
Repairs to roads and streets	358 45
	$682 79

Falls Road Bridge.

Painting iron floor beams and repaired roadway floor.

Charged to—

Maintenance of bridges and culverts	$73 14

Franklin Road Bridge Over Gwynn's Falls.

This bridge had formerly been painted with Aetna iron paint, which was scraped off down to the iron, both above and under floor. Two coats of Lowe Brothers' Red Oxide of Iron Paint and one coat of Black Metalcote paint was then applied.

Charged to—

Maintenance of bridges and culverts....................	$657 04
Repairs to roads and streets..........................	19 03
	$676 07

Franklin Road Culvert, East of Western Maryland Railroad.

A new concrete culvert was erected on Franklin road, east of the Tide Water Division of the Western Maryland Railroad. This culvert is of the box type and extending the entire width of the roadway, 41 feet 3 inches. Waterway opening is 24 square feet, side and end walls are plain concrete, and cover-slab is of reinforced concrete.

Charged to—

Maintenance of bridges and culverts....................	$1,845 80
Paving cross streets and repairs to roads and streets......	174 05
	$2,019 85

Hamburg Street Bridge.

When this bridge was constructed under the terms of Grade Crossing Elimination Ordinance No. 387, of August 16, 1909, the footway 10 feet in width along the south side of the structure was supported on a line of columns placed along the south building line of Hamburg street. This created an open area in front of the houses varying in height from a few feet to the full heighth of the bridge, which was a source of nuisance and an encouragement to crime. To correct this condition, it was decided to erect curtain walls enclosing the areas so as to prevent accumulation of filth and access thereto. The work was done by forces of the Repair Division.

Charged to—

Maintenance of bridges and culverts......................	$1,439 70

Harford Avenue Bridge Over Herring Run.

A new lighting system was installed on this bridge, including latest improved incandescent lights, time switch, etc. Other minor repairs were made to catch-basin gratings.

Charged to—

Maintenance of bridges and culverts......................	$607 83

Harmon's Bridge.

Minor repairs were made to this bridge, including the renewing of twelve bent posts and repairs to roadway, etc.

Charged to—

Maintenance of bridges and culverts......................	$238 38
Repairs to roads and streets............................	28 00
	$266 38

Latrobe Park Footbridge.

As described in report for 1912, a new footbridge was erected, crossing the tracks of the Baltimore and Ohio Railroad Company in Claggett street, at the southwest corner of Latrobe Park. The cost of the structure was charged and reported in 1912, except on account as below, which was remaining cost of steelwork erected by Dietrich Brothers of this city.

Charged to—

Maintenance of bridges and culverts......................	$480 00

Lexington Street Bridge.

On account of the Fallsway it was necessary to remove this bridge, its removal being superintended by this Department, and hauling and storing of ironwork charged as below.

Charged to—

Maintenance of bridges and culverts	$188 42
Repairs to roads and streets	21 50
	$209 92

Garrison Lane Culvert, South of Pennsylvania Railroad.

Work done on this culvert included a concrete slab on the east end, the same to act as a retaining wall for the road; also other minor repairs such as drain pipe and repairs to hand railing.

Charged to—

Maintenance of bridges and culverts	$63 50

Jenkins Lane Bridge.

As this bridge formerly had one floor of two-inch material, on account of increased traffic of heavy teams, we deemed it necessary to lay another floor of three-inch material over the present floor.

Charged to—

Will appear in the report for 1914.

Lee Street Bridge.

Lamp posts were provided for the incandescent lighting system on the east and west approaches.

Charged to—

Maintenance of bridges and culverts	$42 05

Light Street Footway.

This footway was replaced with an entire new structure, the length of same being 735 feet long by 3 feet wide, including hand railing and guard railing on the roadside.

Charged to—

Maintenance of bridges and culverts.................... $1,386 43

Lombard Street Bridge.

Painting ironwork under floor with two coats iron oxide; top, including hand railing, painted with one coat iron oxide, and one coat of Lowe Brothers' Black Metalcote. A concrete retaining wall was erected at east and west end of both footways. All new stringers were put in under both footways, and new floor laid where necessary. Minor repairs were made to hand railing and other ironwork of bridge.

Charged to—

Maintenance of bridges and culverts.................... $1,210 61

Madison Street Bridge.

This bridge was removed on account of the Fallsway construction. This Department superintended the removing of same, including the checking of iron sold as junk and hauling lumber.

Charged to—

Maintenance of bridges and culverts...................... $22 75

Maryland Avenue Bridge.

The east driveway of this bridge was improved by removing the wooden stringers which supported the roadway and replacing same by steel "I" beams, including the railway area; also paving same with white oak blocks with bitumen-poured joints. The wooden east footway was replaced by a reinforced concrete footway, supported on steel "I" beams, three inches in thickness. Oak block paving of roadway is laid on a three-inch Georgia pine under-floor.

Charged to —

Maintenance of bridges and culverts	$1,193 53
Paving cross streets	786 14
	$1,979 67

Miscellaneous Account Tool and Supplies.

Various tools, supplies, etc., were purchased, and work done not chargeable to any specific bridge. Inspection was also periodically made of all bridges, the expense of which was:

Charged to—

Maintenance of bridges and culverts	$1,033 68
Repairs of roads and streets	3 00
	$1,036 68

Miscellaneous Surveys, Blue Prints, Etc.

Not chargeable to any definite individual account. Total expenditures to this account were:

Charged to—

Maintenance of bridges and culverts	$37 40

Montpelier Street Culvert.

A portion of the old hand-rail taken from the Lexington Street Bridge over Jones Falls was placed on the Montpelier Street Culvert.

Charged to—

Maintenance of bridges and culverts	$71 19

Monument Street Bridge.

This bridge was removed on account of the Fallsway construction. This Department superintended the removing of same, including the checking of ironwork sold as junk and hauling lumber.

Charged to—

Maintenance of bridges and culverts	$15 69
Repairs to roads and streets	58 63
	$74 32

Mount Vernon Avenue Bridge.

A portion of the top floor and guard-rail was repaired, also minor repairs to piers and drainage underneath of bridge was readjusted to prevent scour around foundations.

Charged to—

Maintenance of bridges and culverts	$23 70
Paving cross streets and repairs to roads and streets	204 50
	$228 20

North Avenue Bridge.

Painting hand-rail one coat iron oxide, and one coat Metalcote; also repairs to hand-railing.

Charged to—

Maintenance of bridges and culverts	$585 96

North Monroe Street Bridge.

Minor repairs to top floor of driveway and footways.

Charged to—

Repairs to roads and streets	$0 69

Old Liberty Road Culvert.

Repairs to guard-rail along both sides of road.

Charged to—

Maintenance of bridges and culverts	$43 66

Rayner Avenue Culvert.

A concrete parapet wall was built on the south side of this bridge; also repairs on the north spanded wall, including fence on north and south side and reinforcing inside of arch along water line the entire length of culvert.

Charged to—

Maintenance of bridges and culverts	$2,051 98
Repairs to roads and streets	6 00
	$2,057 98

Sales of Old Material.

An amount of old iron "I" beams taken from one of the bridges was sold, and following is cost of hauling same to load on cars.

Charged to—

Maintenance of bridges and culverts	$14 70

Slingluff Avenue Bridge.

The ironwork was painted with two coats of oxide of iron paint.

Charged to—

Maintenance of bridges and culverts	$11 00

Reese Street Bridge.

Repairs to guard-rail, including extension of same.

Charged to—

Maintenance of bridges and culverts	$25 36

South Monroe Street Bridge.

Erecting name tablet and minor repairs, including painting and hand-rail.

Charged to—

Maintenance of bridges and culverts	$167 38
Repairs to roads and streets	16 81
	$184 19

St. Paul Street Bridge.

The installation of electric lights by the Kingsbury-Samuels Electric Company under contract. This includes an up-to-date incandescent system, including time switch, etc., in the place of the old gas system which was expensive and unsightly. Minor repairs were also made to ironwork, etc.

Charged to—

Maintenance of bridges and culverts	$796 03
Repairs to roads and streets	5 50
	$801 53

Thirtieth Street Culvert.

Repairs to guard-rail and other minor repairs.

Charged to—

Maintenance of bridges and culverts	$67 05

Union Avenue Bridge.

Minor repairs were made to the south sidewalk of this bridge.

Charged to—

Maintenance of bridges and culverts	$11 48

University Parkway Bridge Over Stony Run.

The cement sidewalk on the southeast end of this bridge was extended, also repairing a portion of the north side near the east end.

Charged to—

Maintenance of bridges and culverts	$12 30
Repairs to roads and streets	81 06
	$93 36

Wilkens Avenue Bridge Over Gwynn's Falls.

The top and bottom roadway floor of this bridge was renewed.

Charged to—

Maintenance of bridges and culverts	$388 14
Repairs to roads and streets	1,177 99
	$1,566 13

Wilkens Avenue Culvert Over Gwynn's Run.

The parapet walls of this bridge were underpinned on all four corners, including considerable amount of filling in and grading around same.

Charged to—

Maintenance of bridges and culverts	$652 86

Wilkens Avenue Culvert Over Maiden Choice Run.

Rubble masonry retaining walls were added at four corners, extending the present head-walls sufficiently far to support footways.

Charged to—

Maintenance of bridges and culverts	$203 28

MAINTENANCE OF BRIDGES AND CULVERTS

Appropriation		$18,000 00
Empty cement bags returned		237 11
Transferred from Emergency Fund		7,000 00
		$25,237 11

EXPENDITURES.

Labor, as per pay rolls	$12,974 84	
Lumber	4,143 38	
Tools, hardware, etc	631 12	
Paints, oils and brushes	503 98	
Hauling	1,336 61	
Cement	757 19	
Paving sand and gravel	242 13	
Blue printing and developing	63 08	
Structural steel	485 00	
Ornamental lamps and posts installed	251 52	
Wiring Calvert and St. Paul street bridges	1,745 46	
Wiring Harford Avenue Bridge, over Herring Run	387 78	
Draughting room and field supplies	127 21	
Building material	16 30	
Masonry work	203 28	
Castings	58 25	
Surveys and marking lines	20 00	
Reinforcing floor beams	504 63	
Incidentals and miscellaneous	699 73	
Total		25,151 49
Surplus of credit		$85 62
Balance to surplus, 1913		85 62

Respectfully submitted,

JAMES W. OGIER, *Assistant Engineer.*

REPORT OF

J. U. ISAACS, *Assistant Engineer*

SUB-DIVISION OF SEWERS

Report of J. U. Isaacs, Assistant Engineer
1913

BALTIMORE, January 15, 1914.

MR. H. K. MCCAY, *City Engineer.*

DEAR SIR—I beg to submit the following report of the work done by the Sewer Division during the year 1913:

NEW DRAINS.

The length of new drains laid in 1913, exclusive of inlet connections, was 5,630.5 feet; the length of such connections being 785 feet.

In addition to this, in connection with the work of installation of new inlets, the change of location of old inlets and the general repair work of the Division, there was laid 3,294 feet of drain pipe of sizes between 12-inch and 24-inch diameter.

Under the head of New Drains the following work was done during the year 1913:

Lateral Drain in Gorsuch Avenue.

Eighteen-inch double strength vitrified pipe, extending from inlet at northeast corner Greenmount and Gorsuch avenues, eastward in north footway of Gorsuch avenue to manhole at northwest corner Gorsuch avenue and Old York road, a distance of 240 feet.

Side inlets were constructed on northwest and northeast corners of Gorsuch avenue and Old York road. Total cost of work, $1,189.25. Charge: Improvements in and Additions to the Drainage System.

Lateral Connection to Stockholm Street Drain.

Twelve-inch vitrified pipe, connecting with main drain on Stockholm street, about 50 feet west of Scott street; thence southerly in 10-foot alley 100 feet; thence westerly in 10-foot alley to Wicomico street. Seven connections, draining the yards of houses Nos. 857 to 875 Stockholm street, were installed. This work was made necessary on account of regrading and repaving of the alley parallel to Stockholm street. Total cost of work, $1,013.42. Charge: Account Paving Private Alleys, $846.18; Improvements to and Additions to Drainage System, $167.24.

Lateral Drain in Brentwood Avenue.

Twelve-inch vitrified pipe, connecting with inlet on northeast corner Biddle street and Brentwood avenue, running northerly in east footway of Brentwood avenue to first alley north of Biddle street, a distance of 97 feet.

Two grating inlets were installed at the alley north of Biddle street and the existing Sewerage Commission inlet at the northeast corner of Biddle street and Brentwood avenue entirely reconstructed. Total cost of work, $411.27; work done in 1912, $150.84; work done in 1913, $260.43. Charge: Private Paving and Inspection, $209.43; Improvements and Additions, $51.

Reconstruction of Sanitary Sewer in Moses Alley.

Eight-inch vitrified pipe, connecting with 12-inch drain in Granada avenue at south building line of Fernhill avenue; thence southerly 125 feet to manhole at intersection of Moses alley; thence easterly in Moses alley. Total distance, 477 feet. Nine six-inch house connections were constructed to this drain. This work was made necessary on account of the regrading of Moses alley by the Commissioners for Opening Streets. Total cost of work, $534.63. Charge: Private Paving and Inspection, account of Commissioners for Opening Streets.

Lateral Drain in Walbrook Avenue and Hilton Street.

Eighteen-inch double strength vitrified pipe, connecting with 24-inch terra-cotta drain in Walbrook avenue, about 200 feet west of Hilton street; thence easterly in Walbrook avenue to Hilton street; thence northerly in Hilton street to manhole at Windsor Mill road.

Fifteen-inch double strength vitrified pipe in Hilton street, from manhole at Windsor Mill road northward to Clifton avenue. Total distance, 602.5 feet. Two side inlets were constructed on northeast corner Hilton street and Clifton avenue; one "F" grate inlet on the northeast corner of Hilton street and Windsor Mill road, and one combination grate and inlet on the northeast corner of Hilton street and Walbrook avenue.

Four manholes and 62 feet of 15-inch inlet connections were also constructed. Total cost of work, $1,938.18. Charge: Private Paving and Inspection, account of Commissioners for Opening Streets.

Extension of Drain in Westwood Avenue.

Eighteen-inch double strength vitrified pipe in Westwood avenue, from manhole at Rosedale street, Westwood to manhole at Windsor Mill road, a distance of 150 feet.

Fifteen-inch double strength vitrified pipe, from manhole at Westwood avenue and Windsor Mill road to inlet at southwest corner, a distance of 16 feet.

Twelve-inch vitrified pipe in south footway of Westwood avenue, between Windsor Mill road and Ellamont street.

Two manholes, three side-inlets, two grate-inlets, 112 feet of 15-inch inlet connections, and 24 feet of 12-inch inlet connections were constructed. Total cost of work, $1,138.45. Charge: Private Paving and Inspection, account of Commissioners for Opening Streets.

Lateral Drain in Thirty-ninth Street.

Fifteen-inch double strength vitrified pipe, connecting with 18-inch terra-cotta drain on Thirty-ninth street, between Oak street and University Parkway; thence running easterly in Thirty-ninth street to Oak street, a distance of 462 feet.

Three manholes, four side-inlets and 132 feet of 12-inch inlet connections were constructed. Total cost of work, $1,734.15. Charge: Private Paving and Inspection, account of Commissioners for Opening Streets.

Extension of Drain in Reisterstown Road.

Forty-two inch concrete pipe, connecting with main drain at Orem lane and Reisterstown road; thence southerly along west side of Reisterstown road to manhole at Ruskin avenue; thence westerly, emptying in open ditch at a point about 175 feet west of Reisterstown road. Total length of 417 feet.

One manhole and two concrete and brick curves, each 33 feet in length, were constructed. Total cost of work, $3,066.85. Charge: Private Paving and Inspection, account of Sewerage Commission, $2,717.20; Improvements in and Additions to the Drainage System, $349.65.

Extension of Drain in Cedar Avenue.

Twenty-inch double strength vitrified pipe, connecting with existing manhole located in Cedar avenue, about 175 feet north of Thirty-fourth street; thence northerly to manhole at Crisp street.

Eighteen-inch double strength vitrified pipe, from manhole at Crisp street to manhole at north side of Thirty-sixth street.

Fifteen-inch double strength vitrified pipe, from manhole at north side of Thirty-sixth street to manhole at Carwell street.

Twenty-four inch double strength vitrified pipe was laid in Cedar avenue at the intersection of Thirty-fourth street, from existing 20-inch drain in Cedar avenue, eastward in Thirty-fourth street to east building line of Cedar avenue. This is dead-ended at present, but will be used later to divert the drainage eastward in Thirty-fourth street to Stoney Run, and thus relieve the old drain in Cedar avenue, which is now overloaded. Total length of 1,075 feet. Six manholes, five inlets and 96 feet of inlet connections were constructed in conjunction with this work. Total cost, $5,807.17. Charge: Private Paving and Inspection, account of Commissioners for Opening Streets, $5,293.51; charge: Improvements and Additions to Drainage System, $34.24; Repairs of Sewers, $479.42.

Lateral Drain in Charles Street.

Fifteen-inch and 12-inch vitrified pipe in Charles street, at intersection of Thirty-fourth street, connecting with 24-inch drain in west footway of Charles street, and thence running around the Hopkins Oval for a distance of 552 feet. Two manholes and 15 grate-inlets were constructed for this work. Total cost of work, $1,752.82. Charge: Private Paving and Inspection, account of Roland Park Company, $557.29; account of Johns Hopkins University, $557.29. Charge: Improvements in and Additions to Drainage System, $638.24.

Lateral Drain in Thirty-eighth Street.

Fifteen-inch double strength vitrified pipe in Thirty-eighth street, between Falls road and Hickory avenue, a distance of 307 feet.

Eighteen-inch double strength vitrified pipe, connecting with 24-inch drain in Falls road and running eastward to east building line for a distance of 27 feet.

Two manholes, three side-inlets, and one combination inlet were constructued. Total cost of work, $1,841.20. Charge: Private Paving and Inspection, account of Commissioners for Opening Streets, $1,708.12; Improvements in and Additions to the Drainage System, $133.08.

Lateral Drain in Twenty-first Street.

Eighteen-inch double strength vitrified pipe, from existing manhole at intersection of Twenty-first street and Hargrove alley; thence easterly in Twenty-first street a distance of 49 feet. This work was abandoned at this point, and later picked up by Sewerage Commission and extended to Calvert street. Cost, $401.73. Charge: Improvements in and Additions to the Drainage System.

Lateral Drain in Patterson Park Avenue.

Twelve-inch vitrified pipe, from main drain in Orleans street, and thence southerly in west footway of Patterson Park avenue, a distance of 265 feet. One combination grate and inlet and one side-inlet were constructed in connection with this work. Charge: Private Paving and Inspection, account of Paving Commission, $459.53; Improvements in and Additions to the Drainage System, $206.45; total cost, $665.98.

Completion of Drains in High Street.

The work of constructing drain and connections in High street, between Hillen and Front streets, was started in 1912 and completed the early part of this year. This work was authorized by the Western Maryland Railroad Company and the cost of this work was borne by them. Total cost of work, $1,353.42; work done in 1912, $1,246.77; work done in 1913, $106.65. Charge: Private Paving and Inspection, account of Western Maryland Railroad.

Low Street, Between Front Street and the Fallsway.

Two side inlets with connections and one manhole were constructed in Low street, between Front street and the Fallsway, to drain the sump formed by the regrading of Low street. Total cost of work, $627.55. Charge: Improvements in and Additions to the Drainage System.

Drain for Municipal Garage.

The surface drainage of the Municipal Garage was provided for by the construction of an eight-inch vitrified pipe drain, with connections to the rain leaders and area of the building in Hargrove alley west of St. Elizabeth's Court, a distance of 180 feet. Total cost of work, $210.23. Charge: Improvements in and Additions to the Drainage System.

RECONSTRUCTION AND REPAIR.

McMechen Street Sewer.

The old wooden invert in the McMechen street sewer, between Jordan alley and Bolton street, for a distance of 256 feet, was removed and replaced by one of vitrified blocks laid in cement mortar on a cinder concrete base, and the side walls and arch plastered with cement mortar. Total cost of work, $1,264.95. Charge: Repairs of Sewers.

Chatsworth Run Sewer.

The old wooden invert in the Chatsworth Run sewer in the bed of Myrtle avenue, between George and Greenwillow streets, for a distance of 325 feet, was removed and replaced by one of vitrified blocks laid in cement mortar on a cinder concrete base, and the side walls and arch plastered with cement mortar. Total cost of work, $1,183.56. Charge: Repairs of Sewers.

Broadway Sewer.

The old cast-iron girder-plates over the Broadway sewer were replaced by a concrete slab, from the intersection of Thames street and Broadway, southward for a distance of 78 feet. Total cost of work, $734.25. Charge: Repairs of Sewers.

Inlets and Minor Sewer Repairs.

Under this head is included all work of repairs to inlets and drains, or work incidental to such repairs, where the cost of such work did not exceed $50.

The cost of such work during the fiscal year was $5,609.29, and the number of locations at which work was done was 319, making an average cost of $17.59 per location. Charge: Repairs of Sewers, $4,764.97; charge: Improvements in and Additions to Drainage System, $844.32.

Inlet Manholes.

Manholes were cut in 65 stone inlet covers and castings fitted to same. Total cost of this work was $634.45, averaging per manhole, $9.76. Charge: Improvements in and Additions to the Drainage System.

Calvert and Baltimore Streets.

At the intersection of Calvert and Baltimore streets a broken private drain belonging to the Emerson Hotel Company caused a large cavity to form through the liquefication of the material of the street bed and the flowing of the same through the drain. Upon the subsequent choking of this drain by the street material, the condition became evident to the Emerson authorities, and this Department was authorized by them to relieve the situation at their expense, and they having since refused payment of the account, the cost of the same is being temporarily carried by the sewer repair account until the attendant litigation is settled. Charge: Repairs of Sewers, $2,403.98.

North and Patterson Park Avenues.

This work consisted of the repair of top and side walls of the drain in North avenue at intersection of Patterson Park avenue, for a distance of 100 feet, also the filling up of cave-in over same. Total cost of work, $429.35. Charge: Repairs of Sewers.

Reconstruction of Manhole at Mount Royal Drive and Newington Avenue.

This manhole, through its faulty original construction, became choked by debris, blowing off the head and damaging the surrounding improved paving for a considerable area. It was necessary to entirely remodel this manhole. Total cost of work, $667.48. Charge: Repairs of Sewers.

New Inlets, etc., and Inlets Reconstructed.

Under this heading was done all work in connection with inlets or inlet connections that could be considered additional to or improvement in the system, as distinguished from minor repairs. The total cost of this work was $13,919.80, and the number of locations where such work was done was 145. Charge: Improvements in and Additions to the Drainage System, $12,484.88; Repairs of Sewers, $1,434.92.

Vicinity of Lexington Market.

On account of the rearrangement of sewer inlets in the vicinity of Lexington Market, it was necessary to repave a considerable area to properly divert the surface drainage. This work was done by the Division of Street Repairs and charged to Improvements in and Additions to the Drainage System. Total cost of work, $1,108.78.

Mondawmin, Roslyn, Carlisle and Bateman Avenues.

The macadam paving over the trenches of the drainage work on the above streets, as well as the remodeling of the intersection to remove the existing valley gutters was done by the Division of Street Repairs and charged to Improvements in and Additions to the Drainage System. Total cost of work, $280.64.

Inlets at Howard and Ostend Streets.

In connection with the lowering of the grade of Howard street, at the intersection of Ostend street, it was necessary to construct new inlets and connections at the northeast and southeast corners, and at the west side of Howard street, opposite the center of Ostend street. Cost of work, $346.05. Charge: Regrading, Repaving, Underpinning Walls on Howard Street, Stockholm Street and Eutaw Street, etc.

WORK DONE FOR OTHER CITY DEPARTMENTS, CORPORATIONS AND PRIVATE INDIVIDUALS.

Under this general head is included the less important work for which no detailed account has been previously given.

Commissioners for Opening Streets.

New drains, new inlets and connections, changing location of old inlets, and extension of old drains, are included under the above head. The total cost of such work done during the fiscal year is $1,520.33, and the number of locations, where such work was done is 23. Charge: Private Paving and Inspection.

Paving Commission.

In connection with the changes of grades and lines of curb, incidental to the paving work of the Paving Commission, inlet and connection work in the nature of changing locations of old inlets and connections, constructing new inlets and connections, narrowing of inlet openings, raising drip-stones, etc., was done in 220 locations at a total cost of $8,905.83. Charge: Private Paving and Inspection.

Water Department.

Changing inlet connection at Park avenue and McMechen street, $191.50; lowering 15-inch terra-cotta drain at Mount Royal avenue and Mosher street, $75.63. Charge: Private Paving and Inspection, $267.13.

Sewerage Commission.

Under this head is included the reconstruction of inlets and connections. Total cost of such work was $1,080.31, and the number of locations where such work was done was 13. Charge: Private Paving and Inspection.

Harbor Board.

Under this head is included the construction of three new inlets and connections, on account of Key Highway. Cost, $314.17. Charge: Private Paving and Inspection.

Electrical Commission.

Changing two inlet connections at Baltimore and Linwood avenue, $146.43. Charge: Private Paving and Inspection.

Northern Central Railway Company.

West side Central avenue, south of Orleans street, new grate inlet and connection	$109 52
Northeast and southeast corners Central avenue and Fairmount avenue, new inlets and connections	127 08
East side Central avenue, north of Lombard street, new inlet and connection	150 51
South side Boston street, opposite Lakewood avenue, two grate inlets and connections	258 73
Central avenue and Jefferson street, new track drain and connection	57 77
Southeast corner Central avenue and Monument street, new grate inlet and connection	178 42
Monument street, between Buren and Forrest streets, four new grates and connections, also changing two inlets	428 75
Northeast corner Central and Eastern avenues, connecting pipe to inlet	44 53
East side Central avenue, north of Eastern avenue, new grate inlet, side inlet and connections	304 94
North side Monument street, between Ensor street and Ajax alley, pipe line, manhole, grate inlet, side inlet and connections	280 42
Total	$1,940 67

Miscellaneous Corporations and Individuals.

Ryan & Reilly Contracting Company, Oak and Twentieth streets, restoring manhole	$5 37
Western Maryland Railroad Company, northwest corner Front and Hillen streets, two new inlets and connections	237 62
Baltimore and Ohio Railroad Company, Pratt street, west of Fremont avenue, new pipe line and side inlet	592 15
Rochester-Kirkness Realty Company, Harford avenue, opposite Clifton Park entrance, remodeling inlet	86 92
United Railways and Electric Company, northeast corner Charles and Saratoga streets, changing inlet	47 44
J. F. Wiessner Brewing Company, Hoffman street and Shields alley, new inlet head	20 15
McCarthy & O'Herron Company, pumping sub-basement of Baltimore Bargain House	8 53
John T. Lewis & Brothers Company, Fayette and Colvin streets, new connections to sewers	9 75
Cowan Building Company, High and Front streets, new pipe line	28 42
Consolidated Engineering Company, East Falls avenue and Granby street, replacing 18-inch pipe	4 50
J. H. McLauchlan Engineering Company, Bay View power house, building shanty for motor	18 82
Total	$3,000 34

Charge: Private paving and inspection, account of above corporations.

MISCELLANEOUS EXPENDITURES.

Inspection and Tests.

Under this head is included the inspection of the work of laying or repairing private drains in the beds of public streets or alleys, excavating test pits to locate the source of drainage or sewerage trouble, and for general information, relieving choked sanitary sewers where damage to valuable property is imminent, and the cost of similar work done by other departments and charged by agreement to this Department. Cost of above work for 1913, $726.40. Charge: Repairs of Sewers.

Machinery Purchased During the Year.

Two single-cylinder motor-cycles and accessories purchased from Reading Standard Company. Total cost, $488.50. Charge: Repairs of Sewers.

Bay View Siding and Coal Conveyer.

This work, which was started in 1912, was completed in January of this year by the erection of the conveyer structure and machinery.

The contractor for this portion of the work was penalized $90 for failure to complete the work in contract time, this amount representing the actual expense of hauling coal during the period of penalty.

In addition to this, the sum of $50 was, by agreement with him, retained to cover the expense of certain changes in the driving gear. This work has been finished and the plant is operating in a satisfactory manner. The capacity of the plant is 30 tons per hour.

STATEMENT OF EXPENDITURES.

Contract of J. H. McLaughlin Engineering Company for conveyer structure and machinery		$3,360 00
Extra work on above contract		158 81
Philadelphia, Baltimore and Washington Railroad Company, completion of track work, including rearrangement of surface drainage		191 75
Dietrich Brothers, screen bars over hopper		74 25
Rittenhouse-Fleury Company, work of alteration of driving gear		60 00
Labor, erection of screen bars		14 22
Total		$3,859 03
Charge—		
Bay View siding and coal conveyer	$3,822 81	
Repairs of sewers	36 22	
		3,859 03

Respectfully submitted,

J. U. ISAACS,
Assistant Engineer.

RECAPITULATION.

ACCOUNTS.	Private Paving and Inspection.	Improvements and Additions.	Repairs of Sewers.	Paving Private Alleys.	Under-pinning, etc., Howard St., etc.	Bay View Siding, etc.	Totals.
Lateral drain in Gorsuch ave.	....	$1,189 25	....	....	....	....	$1,189 25
Lateral connection to Stockholm Street Drain	....	167 24	....	$846 18	....	....	1,013 42
Lateral drain in Brentwood ave.	$209 43	51 00	....	....	....	....	260 43
Reconstruction of sanitary drain in Moses alley	534 63	....	....	....	....	....	534 63
Lateral drain in Hilton st. and Walbrook ave.	1,938 18	....	....	....	....	....	1,938 18
Extension of drain in Westwood ave.	1,138 45	....	....	....	....	....	1,138 45
Lateral drain in Thirty-ninth st.	1,734 15	....	....	....	....	....	1,734 15
Extension of drain in Reisterstown road	2,717 20	349 65	....	....	....	....	3,066 85
Extension of drain in Cedar ave.	5,293 51	34 24	$479 42	....	....	....	5,807 17
Lateral drain at Charles and Thirty-fourth sts.	1,114 58	638 24	....	....	....	....	1,752 82
Lateral drain in Thirty-eighth st.	1,708 12	133 08	....	....	....	....	1,841 20
Lateral drain in Twenty-first st.	....	401 73	....	....	....	....	401 73
Lateral drain in Patterson Park ave.	459 53	206 45	....	....	....	....	665 98
Completion of drains in High st.	106 65	....	....	....	....	....	106 65
McMechen Street Sewer	....	....	1,264 95	....	....	....	1,264 95
Chatsworth Run Sewer	....	....	1,183 56	....	....	....	1,183 56
Broadway Sewer	....	....	734 25	....	....	....	734 25
Inlets and minor sewer repairs	....	844 32	4,764 97	....	....	....	5,609 29
Inlet manholes	....	634 45	....	....	....	....	634 45
New inlets and inlets reconstructed	....	12,484 88	1,434 92	....	....	....	13,919 80

Work done for Commissioners for Opening Streets	1,520 33						1,520 33
Work done for Paving Commission	8,905 83						8,905 83
Work done for Water Department	267 13						267 13
Work done for Sewerage Commission	1,080 31						1,080 31
Work done for Harbor Board	314 17						314 17
Work done for Electrical Commission	146 43						146 43
Work done for corporations and others	3,000 34						3,000 34
Inspection and tests			726 40				726 40
Transferred to repairs to roads, streets, etc.		5,000 00					5,000 00
Low st., between Fallsway and Front st.		627 55					627 55
Repaving in vicinity of Lexington Market		1,108 78					1,108 78
Drain for municipal garage		210 23					210 23
Repaving Mondawmin, Roslyn, Carlisle and Bateman aves.		280 64					280 64
Repairs to sewer at Calvert and Baltimore sts.			2,403 98				2,403 98
Repairs to sewer at Patterson Park and North aves.			429 35				429 35
Repairs to sewer at Mt. Royal and Newington aves.			667 48				667 48
Bay View siding and coal conveyer			36 22			$3,822 81	3,859 03
Inlets at Howard and Ostend sts.					$346 05		346 05
Machinery purchased			488 50				488 50
Totals of job accounts	$32,188 97	$24,361 73	$14,614 00	$846 18	$346 05	$3,822 81	$76,179 74

REPORT OF
GRAFTON DUVALL

Sub-Division of Sewers—House Connections

Report of Grafton Duvall
1913

CITY ENGINEER'S DEPARTMENT,

SUB-DIVISION OF SEWERS—HOUSE CONNECTIONS.

BALTIMORE, January 1, 1914.

MR. H. K. McCAY, *City Engineer.*

DEAR SIR—I beg to submit the following report, showing the number of houses connected through this Division during the year of 1913, including the entire amount expended for the same and incidental figures thereto. In connection with my report, I desire to say that a complete change in the system of making loans for house connections was made as well as the filing method. Following the order of His Honor, Mayor James H. Preston, bids for sanitary connections were not asked for after April, 1913. The total number of houses given out from January 1, 1913, until the date of the order issued by the Mayor, is seventy-one.

Amount expended during 1913, from January 1 to December 31		$237,012 01
On hand January 1, 1913	$63,119 75	
Credited during 1913	19 64	
		63,139 39
Expended from general fund		$173,872 62
Total amount expended for connections, salaries, etc.		$237,012 01
Incidentals—		
Salaries	$974 61	
File	18 84	
Index folders	5 75	
Ledger	3 35	
		1,002 55
Total amount expended for sewer connections		$236,009 46

This amount, plus the 6 per cent. interest, is to be returned to the city in five years. Each house is also liable for the sum of five dollars.

Number of houses connected during 1913		1,931
Number of houses connected with owners' consent	1,860	
Number of houses connected without owners' consent	71	
Total		1,931

Respectfully submitted,

GRAFTON DUVALL.

REPORT OF
FRANK H. BEALL, *Chief Inspector*

SUB-DIVISION OF INSPECTION

Report of Frank H. Beall, Chief Inspector
1913

City Engineer's Department,
Sub-Division of Inspection.

Baltimore, January 6, 1914.

Mr. H. K. McCay, *City Engineer.*

Dear Sir—I hereby submit a synopsis, showing work performed during the year 1913 in the city's streets by the public service corporations, contractors and individuals on permits issued by this Department, over which this Sub-Division had supervision and control.

The Chesapeake and Potomac Telephone Company constructed in public streets 61,244 feet of conduit.

The United Railways and Electric Company did a large amount of repairs and renewals to their tracks and structures during the year. Considerable inspection was necessary over their operations, both day and night, during which time over seven thousand different locations were inspected, exclusive of the one hundred and ninety preliminary inspections made prior to the issuance of the permits.

The Consolidated Gas Electric Light and Power Company constructed, in new and renewed service pipes, 410,500 feet; in new and renewed gas mains 60,100 feet, and in addition, did a large amount of work in disconnecting mains and service pipes, in changing the location of pipes and in making new connections. We had a very rigid inspection over this work and covered nearly 20,000 different openings made in the public streets, as well as 152 preliminary inspections made before the issuance of the permits. A very considerable amount of the repaving was restored by the Sub-Division of Street Repairs upon our paving orders.

The various pole and electric operating companies performed work in the public streets on approximately 1,400 permits, which covered approximately 7,000 different locations. Most of the paving disturbed in the footways was restored by the Chief Footway Inspector upon our paving orders.

During the year we supervised the blasting of sewer trenches, tunnels, foundations, embankments, etc., on 83 permits. This Sub-Division issues all permits and certificates of fitness necessary when explosives are handled in any manner whatsoever.

This Sub-Division issued 461 permits for the removal of steam rollers, traction engines, etc., as provided for in Ordinance No. 132, approved July 3, 1912.

The Baltimore and Ohio Railroad Company laid a considerable amount of new drain pipe and did the usual amount of repair work to their tracks and structures in the public streets, as well as the construction of new sidings under ordinances.

The Western Maryland Railroad Company did the usual amount of repairing to their tracks and structures in the public streets.

The Philadelphia, Baltimore and Washington Railroad Company did the usual amount of repair work during the year, as well as the construction of sidings under ordinances.

The Northern Central Railway Company did a very considerable amount of repair work to their tracks, renewal of switches, change of rails and relocation of sidings during the year, as well as the construction of sidings under ordinances.

The Terminal Heating and Freezing Company did the usual amount of repairing to their steam mains and service during the year and constructed eight new services.

The various electrical operating companies removed and trimmed during the year 2,510 trees in the public streets, under the supervision of this Sub-Division.

In addition to the foregoing, we inspected a large amount of work performed in the public streets on permits of a miscellaneous character. Over two hundred complaints, which arose from blasting, pole work, tree trimming, damaged drains, etc., were investigated and reported on. During the year a great number of paving tickets were forwarded to each respective division for their attention, and practically all of the paving disturbed on permits issued to corporations, contractors and individuals was restored by this Department.

About $150 in delinquent poles was reported to the Collector of Water Rents and Licenses for his information and attention, against the various pole-setting companies within the city.

Private drain work was inspected by this Division until August 1, 1913. Since then work of this character has been supervised by the Sewer Division of this Department.

During the year this Division has earned over and above the salary of the Chief Inspector and one clerk the sum of $1,660.65.

Respectfully submitted,

F. H. BEALL,
Chief Inspector.

REPORT OF

D. D. PORTER, *Chief Inspector of Footways*

Sub-Division of Footway Inspection

Report of D. D. Porter, Chief Inspector of Footways
1913

City Engineer's Department,

Sub-Division of Footway Inspection.

Baltimore, January 10, 1914.

Mr. H. K. McCay, *City Engineer.*

Dear Sir—I beg to submit the following report, showing the work done and the cost of same in the Footway Inspectors' Division of this Department for the year 1913. The report includes the cost of repaving and repairing footways by assessment, paving private footways, paving in front of city property, private paving and inspection and miscellaneous footway repairs, due to the resetting of curb by this Department; these footways were in good condition and on grade prior thereto; also the number of inspections made concerning footways, of which there were a great number, on account of the numerous excavations made across footways for sewerage connections, also investigations made concerning damage and accident suits and surface drains put under the footways.

Footway Notices.

The number of notices sent to property-owners during the year were 11,023, which is an increase of 4,523 over the year 1912.

Concrete Footways Laid.

There were 8,088 notices sent to property-owners to repave footways with concrete, where the bed of the streets had been paved with improved material and new curb installed; of this number, 7,442 concrete footways were laid for a total of 1,-

485,733 square feet, showing an increase of 5,867 concrete footways over 1912.

FOOTWAY DRAINAGE.

The number of open water drains put under footways during the year were 3,174, which is an increase of 2,299 over the year 1912.

PAVING PRIVATE FOOTWAYS.

There were a number of property-owners who failed to comply with notices sent them to repave dangerous footways. This work was given out on bids and awarded to the lowest responsible bidder. The number of footways thus constructed under inspection of this Department were 158 for a total cost of $11,586.72, and an assessment showing cost of same was sent to the Tax Collector for collection. This amount was charged to Paving Private Footways.

PAVING IN FRONT OF CITY PROPERTY.

New concrete footways were laid around public buildings as follows: Baltimore City Jail, No. 6 Public School, No. 22 Public School, No. 27 Public School, Polytechnic Institute, No. 19 Fire Engine House, Eastern Police Station, and various city squares. Bids were received and the work given to the lowest responsible bidder; work done under inspection of this Department. Total square feet, 43,601.

Total cost of work	$4,965 62
Repairs were made by this Department to footways around various public buildings throughout the city and city squares, fire engine houses, police stations and libraries:	
Repairs made at 181 locations—	
Cost of labor	805 89
Cost of material	95 27
Total	$5,866 78

PRIVATE PAVING AND INSPECTION.

Repairs were made throughout the city upon orders from private parties and the various telephone and telegraph companies in the removal and planting of poles under permits from this Department. The number of footways repaired were 406.

Cost of labor	$1,015 10
Cost of material	351 22
Work done for United Railways Company	2,150 00
Work done for Inspector of Buildings	2,192 09
Work done for Commissioners for Opening Streets	156 57
Work done for Sewerage Commission	24 42
Work done for Paving Commission	24 93
Work done for Superintendent of Lamps and Lighting	30 06
Total	$5,945 29

This was charged to Private Paving and Inspection.

FOOTWAY REPAIRS.

Repairs were made through the city due to the resetting of curbs, change of grades and to footways which were in good condition prior thereto. The cost of said repairs was $773.13.

Cost of labor	$577 74
Cost of material	195 39
Total	$773 13

This was charged to Repairs of Roads and Streets.

FOOTWAY INSPECTORS' REPORT.

Water stops reported to Water Department	106
Water washers reported to and lowered by property-owners	9
Surface drains across footways put under same	3,174
Improved driveways constructed by property-owners	525
Dead and dangerous trees reported to the City Forester	90
Inspections made concerning footways	10,000
Accident and damage suits investigated	12
Footway notices sent to property-owners	11,023
Concrete footways laid throughout the city	7,442

Respectfully submitted,

D. D. PORTER,
Chief Inspector of Footways.

REPORT OF

BRUCE ALDRICH, *Chief Asphalt Inspector*

Sub-Division of Municipal Laboratory

Report of Bruce Aldrich, Chief Asphalt Inspector
1913

CITY ENGINEER'S DEPARTMENT,

SUB-DIVISION OF MUNICIPAL LABORATORY.

BALTIMORE, February 5, 1914.

MR. H. K. MCCAY, *City Engineer.*

DEAR SIR—I have the honor to submit the report of the Municipal Asphalt and Chemical Laboratory for the year ending December 31, 1913.

The Laboratory has, during this period, in conjunction with the inspection (at seven asphalt plants) of the manufacture of sheet asphalt and bituminous concrete mixtures used in the construction of 447,000 square yards of pavement (an increase of 126,150 square yards over last year), tested all materials entering into the composition of and made daily examinations and analyses of the output of each asphalt plant.

All asphaltic and tar block fillers used in the laying of bituminous filler granite block streets were tested in this Laboratory, and a number of miscellaneous examinations were made, as will be seen on the attached tabulation sheet.

The work of the Chemical Laboratory has greatly increased during the past year, having made in addition to the coal analyses, many examinations of lead, steel, brasses, greases, oils, etc.

It is necessary for me to point out the lack of working room and storing facilities in this building, considering the increase in the number of analyses and tests that have been made in the past year. The cement department on the first floor could very readily use an additional room. The second floor is very much congested, on account of the large number of asphalt, tar, coal and miscellaneous tests that are being carried on. This condition often causes considerable loss of time, as there is some apparatus used in the miscellaneous work which should always remain set up ready for use, but because of the lack of room, must be taken down after the necessary work is carried out on it. Another difficulty, arising from the lack of space, is the insufficient room for storing samples, which causes the Laboratory to have an untidy appearance.

In the examination of asphalts, it is often necessary to ignite carbon-di-sulphide. This causes considerable carbon-di-oxide in the air of the Laboratory, and due to this, there is great chance for error in determining the sulphur in coals.

These conditions could be remedied if sufficient space were provided to separate the miscellaneous work from the asphalts, tars, etc., and provide storage room for the samples.

Attached hereto, please find a summary-sheet of the cost of maintenance of the Asphalt and Chemical Divisions of the Municipal Laboratory for the year 1913.

Respectfully submitted,

BRUCE ALDRICH,
Chief Asphalt Inspector.

SUMMARY OF EXPENDITURES OF THE ASPHALT AND CHEMICAL DIVISIONS OF THE MUNICIPAL LABORATORY.

(January 1, 1913, to December 31, 1913.)

Asphalt Division—		
Salaries		$10,601 01
Equipment		1,573 15
		$12,174 16
Credit—Asphalt analyses for various departments		1,186 50
Total		$10,987 66
Chemical Division—		
Salaries	$1,919 98	
Equipment	699 13	
	$2,619 11	
Credit—Miscellaneous analyses for various departments	2,059 50	
Total		559 61
Grand total		$11,547 27

SHEET ASPHALT AND BITUMINOUS CONCRETE LAID DURING THE YEAR.

	Sq. Yds.
Paving Commission	274,989.41
Commissioners for Opening Streets	112,980.00
City Engineer's Department	59,031.00
Total	447,000.41

	Per Sq. Yd.
Cost of inspection	$0.0207494
Cost of equipment and maintenance	.0050834
Total cost of inspection	$0.0258328

SAMPLES EXAMINED AT MUNICIPAL LABORATORY.

(January 1, 1913, to December 31, 1913.)

ASPHALT DIVISION.

Asphalt cements from plants	1,131
Surface mixtures	981
Asphalt blocks	24
Aztec Mexican asphalt	25
Gilsonite	2
Trinidad asphalt (lake refined)	3
Montezuma Mexican asphalt	25
Bermudez refined asphalt	10
Mexican asphalt (Standard Oil Company)	51
California asphalt	38
Fairfield asphalt	7
Cuban asphalt	1
Texaco asphalt	5
Asphalt fluxes	29
Road oils	15
Block fillers	94
Asphalt sands	55
Limestone dust	7
Binder and bituminous concrete stone	28
Wood block	7
Total	2,538

CHEMICAL DIVISION.

Coal	132	
Brass	10	
Granite cubes (compression test)	45	
Lead	35	
Steel (tension test)	31	
Oils	36	
Greases	17	
Elastic filler (compression test)	1	
Sand	1	
Paints	3	
Asbestos covering	2	
Liquid corrosive	1	
Furnace cinders	2	
Pitometer liquid	1	
Total		317
Grand total for Asphalt and Chemical Divisions		2,855

TABLE SHOWING NUMBER OF BATCHES OF MATERIAL SENT FROM EACH PLANT AND AVERAGE RESULTS OF TESTS OF ASPHALT CEMENTS AND PAVING MIXTURES.

(January 1, 1913, to December 31, 1913.)

PLANT.	Number of Batches.			Average Penetrations.						Average Bitumen (Per Cent.)	
	Binder.	Topping.	Bituminous Concrete.	Binder.		Topping.		Bituminous Concrete.		Topping.	Bituminous Concrete.
				Yd.	Off.	Yd.	Off.	Yd.	Off.		
Baltimore Asphalt Block and Tile Company.	11,740.0	12,346.5	10,184.0	61	60	59	58	62	60	10.8	9.69
American Paving and Con. Company....	1,922.0	2,020.0	1,242.0	62	60	60	59	66	65	10.8	9.3
P. Flanigan & Sons.....................	5,949.0	6,900.0	3,471.0	63	63	61	61	62	62	11.16	9.2
Warner-Quinlan Company...............	7,400.0	6,889.0	12,508.0	64	61	60	58	61	61	11.0	9.86
Southern Paving Company..............	3,936.0	3,793.0	872.0	58	56	58	56	59	58	10.75	9.2
Filbert Paving Company................	3,840.5	4,001.0	1,020.5	61	60	60	59	61	57	10.52	9.57
United States Asphalt Paving Company.	636.0	1,312.0	....	63	61	64	63	....	....	11.04	....
Eastern Paving Company...............	1,117.0	1,148.0	2,062.0	60	59	60	63	60	58	10.67	9.64
Municipal Asphalt Plant................	299.0	427.5	762.0	57	57	57	57	56	55	10.62	9.39

TABLE SHOWING NUMBER OF BATCHES OF MATERIAL SENT FROM EACH PLANT AND AVERAGE RESULTS OF TESTS OF ASPHALT CEMENTS AND PAVING MIXTURES—*Continued.*

(January 1, 1913, to December 31, 1913.)

Average Mesh Composition of Surface Mixtures.

Plant.	Per Cent. Passing Sieve.								
	200-Mesh.	100-Mesh.	80-Mesh.	50-Mesh.	40-Mesh.	30-Mesh.	20-Mesh.	10-Mesh.	8-Mesh.
Baltimore Asphalt Block and Tile Company	10.2	14.8	5.1	24.4	12.3	11.1	10.3	9.0	2.7
American Paving and Con. Company	10.3	14.4	4.4	24.3	13.5	11.4	10.6	8.7	2.4
P. Flanigan & Sons	11.3	18.0	4.4	23.6	12.2	8.7	8.7	8.1	4.3
Warner-Quinlan Company	10.6	10.1	5.1	27.5	13.5	12.7	9.9	8.0	2.6
Southern Paving Company	10.1	17.3	4.6	21.5	12.9	10.8	10.8	8.5	2.5
Filbert Paving Company	10.9	18.6	4.5	20.2	11.4	9.9	9.7	9.6	4.2
United States Asphalt Paving Company	13.1	10.4	5.8	29.8	10.3	11.9	8.3	7.7	2.7
Eastern Paving Company	12.2	15.8	4.9	24.4	15.6	9.8	7.4	5.5	3.6
Municipal Asphalt Plant	10.1	9.8	3.1	21.3	16.0	14.8	12.2	7.4	5.1

AVERAGE MESH COMPOSITION OF BITUMINOUS CONCRETE (TOPEKA SPECIFICATIONS).

PLANT.	Per Cent. Passing Sieve.				
	200-Mesh.	40-Mesh.	10-Mesh.	4-Mesh.	2-Mesh.
Baltimore Asphalt Block and Tile Company	10.0	25.4	34.4	22.7	7.2
American Paving and Con. Company	8.2	27.4	33.7	21.5	9.2
P. Flanigan & Sons	7.9	33.4	36.1	18.3	3.6
Warner-Quinlan Company	10.4	27.6	36.2	20.9	4.8
Southern Paving Company	9.5	32.5	31.0	18.8	7.6
Filbert Paving Company	7.8	27.0	38.1	17.7	9.0
United States Asphalt Paving Company	....	....	....	....	....
Eastern Paving Company	9.5	31.6	32.4	18.7	6.8
Municipal Asphalt Plant	9.0	31.5	36.1	17.7	5.1

REPORT OF

R. BROOKE MAXWELL

City Forester

Report of the City Forester

1913

BALTIMORE, January 1, 1914.

MR H. K. MCCAY,
City Engineer.

DEAR SIR:

I have the honor to submit herewith the first annual report of the Forestry Division of the City Engineer's Department for the fiscal year ending December 31, 1913.

REGULATING AND INSPECTING PRIVATE WORK.

After organizing the Division, the first work taken up was the matter of regulating and inspecting work done by private individuals. This was done by means of a permit system. The issuance of a permit for any sort of tree work frequently involves a preliminary and final inspection. The permit is accompanied by a set of specifications, which indicates the proper manner in which the work is to be done, and no work is approved until it fulfills the requirements of these specifications. The permit system proves fairly satisfactory, but is not the ideal method of municipal regulation of the street tree problem. Until the Division has sufficient funds to do all of the necessary work in connection with planting, pruning, spraying, removing, etc., the problem will not be fully and satisfactorily solved.

PRIVATE PLANTING.

The number and varieties of trees planted by individuals under the permit system since March 1, 1913, is tabulated below:

Species.	No.
Oriental plane	452
Norway maple	206
American elm	1
Sugar maple	37
European linden	16
Pin oak	1
Silver maple	138
Total	851

WORKING CENTER.

As the work of the Division grew it was found necessary to establish a building to be used as a working center. Accordingly, a building (sixteen feet by thirty feet) was erected by the Division of Forestry on the North avenue lot. This building serves as a tool house and as a meeting place for workmen and foremen. It contains a well-equipped shop, where tools are repaired and sharpened, and also an office, which is used by the Assistant City Forester and his foremen. Surrounding this building is a small tract of ground about one-eighth of an acre in area. It is used by the Division as a heeling-in ground and as a place for compost heaps. The Street Cleaning Department has generously donated to this Division a great amount of excellent street sweepings, which is being mixed with good, rich soil (whenever it is available) and piled in heaps to decompose. Several hundred tons of this material have already been been saved and is highly prized by the Division.

PRUNING WORK DONE BY THE DIVISION.

Realizing that it would be impossible to properly prune all of the trees in the city under several years, it was thought advisable to select localities where the more desirable species were growing and to put the trees there in proper growing condition. In these localities the low branches, all dead wood and fungous-covered branches were removed. Work of this nature was done on the following streets:

Mt. Royal avenue, from North avenue to Guilford avenue.
North avenue, from McCulloh street to Mt. Royal avenue.
Linden avenue, from North avenue to Dolphin street.
Eutaw Place, from North avenue to Druid Hill Park.
Madison avenue, from Druid Hill Park to Hoffman street.
Lafayette avenue, from Mt. Royal avenue to McCulloh street.
Park avenue, from Lafayette avenue to Wilson street.
Charles street, from North avenue to Twenty-fifth street.
Calvert street, from Twenty-fifth street to Thirty-first street.

About five hundred large trees and one thousand small trees were pruned during the season.

PLANTING DONE BY THE DIVISION OF FORESTRY.

Numerous requests from individuals have been received by the Division to place trees in front of their property. Requests have also come from neighborhoods to beautify a particular section by planting. The Division has found it impossible to comply with these requests, but, as far as possible, has tried to co-operate with those interested in tree planting in order that something might be done. Trees have frequently been planted for individuals, who purchased their own stock. The regular planting of the Division, since it has to be very limited, is being done where the greatest number of people will be benefited. Accordingly, public drives and otherwise much used thoroughfares are selected as the most desirable places to establish trees first. Below is a list showing the number, species and location of the young trees planted by this Division since March 1, 1913:

PLANTED IN SPRING OF 1913.

Holbrook street, from Lamont avenue to Hoffman street, planes	*89
Collington avenue, from Ashland avenue to Orleans street, Norway maples	*117
Allendale street, from Windsor Mill road to Clifton avenue, Norway maples	†42
Belle avenue, from Garrison avenue to western city line, European lindens	†104
Thirty-second street, from Charles street to St. Paul street, sweet gums	†23
Ensor Street Triangle, planes	*3
Total	378

PLANTED IN FALL OF 1913.

Garrison avenue, from Walbrook Junction to Berwyn avenue, planes	243
Mt. Royal avenue, from North avenue to Guilford avenue, planes	99
Hampden avenue, from Twenty-seventh street to Twenty-ninth street, planes	†42
Twenty-eighth street, from Huntingdon avenue to Hampden avenue, Norway maples	†20
1300 block Aisquith street (co-operation with owner), silver maples	13
Poplar Grove street (scattered), silver maples	41
School No. 64, mixed	15
Berwyn Triangle, ginko	1
Baltimore and Ohio tunnel surface (silver maples, 27; planes, 8)	35
Replanting failures on parked streets	168
City Jail, silver maples	4
Old Folks' Home (co-operation with institution), planes	19
Miscellaneous (property-owners), Norway maples	12
Total	612
Total planted in spring of 1913	378
Grand total	990

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*Planting done for the Paving Commission.

†Planting done for the Commissioners for Opening Streets.

REPLANTING FAILURES.

All failures which occurred during the summer of 1913 on parked streets were filled during the fall of 1913. This work was paid for by the Division of Forestry. Because of a particularly unfavorable season and the late date at which some of the planting was done, the percentage of failures was greater than it should have been, amounting to 19 per cent. The failures were filled as follows:

Location and Species.	No.
Allendale street, Norway maples	*36
Belle avenue, lindens	25
Bond street, pin oaks	23
Collington avenue, Norway maples	42
Huntingdon avenue, pin oaks	14
Parkwood avenue, Norway maples	8
Thirty-second street, sweet gums	12
Hoffman street, planes	6
Woodbrook avenue, ginkos	2
Total	168

*Twenty-one of these were lost due to the placing of a sewer.

WASHINGTON'S GIFT.

The Division wishes to acknowledge here its gratitude to the City of Washington for its generous gift of trees. Six hundred trees were received from the City of Washington for the mere cost of digging and transporting the stock. Four hundred of these were Oriental planes, the remaining two hundred being silver maples. (The Division recognizes that silver maples are not especially desirable for street tree planting.) Some of these silver maples were planted in outlying districts and will be given the necessary attention to keep their crowns well shaped. Others of the silver maples were used for screen planting on the Baltimore and Ohio tunnel surface.

MAINTENANCE OF GRASS ON PARKED STREETS.

The maintenance of grass on newly-parked streets was taken care of by the Division of Forestry during the summer months. It was found necessary to cut the grass at least once a week. It was also found necessary to water the grass and young trees during the hot, dry months.

This maintenance of grass on parked streets is an important problem and as the number of parked streets increases it is safe to say that unless the funds of this Division are materially increased the grass will not be properly cared for.

After dealing with the problem of parked spaces for a year, the Division wishes to respectfully suggest the following: Intensive parking (using both trees and grass) can be used most advantageously in suburban or outlying sections. This is found to be true because of the fact that property-owners in a semi-rural section take great interest in helping the city to care for the areas. It is further respectfully suggested that the proper way to treat narrowed residential streets in the heart of the city is to properly space and plant desirable shade trees without the grass. It is important to leave a large opening about each of these trees—usually a space four feet by eight feet is adequate.

FIGHTING INSECTS.

Both leaf-eating and scale insects were found throughout the city during the past summer. Of the former, the tussock moth, bag worm and the fall web worm were common. Of the scale insects, the soft scale, the cottony maple scale and the oyster shell scale were found.

The northwestern portion of the city, including Forest Park and Walbrook, was very badly infested with the bag worm. These insects were discovered very early in the summer and they were thoroughly sprayed for during the early part of July. The application of the poison was found to be very effective and a second spraying was unnecessary. Later in the summer a serious infestation of tussock moth larvae was discovered in the vicinity of Mt. Vernon Place. These were sprayed for with arsenate of lead and destroyed. The scale insects will not be sprayed for until the winter months. This is necessary because of the fact that the materials used in the fighting of the insects is almost sure to burn the foliage if applied during the summer. Below is a list of the number and variety of trees sprayed during the past summer:

Variety.	No.
Oriental plane	1,500
Norway maple	200
Silver maple	250
North Carolina poplar	145
Total	2,095

The cost of this work did not exceed five cents per tree.

MUNICIPAL NURSERY.

From the very first the need of a municipal nursery was apparent. Although it is possible to buy very desirable stock from nurserymen, the problem of transportation must always be dealt with. This is a serious problem because it means the handling of the stock from three to five times, which, together with other unfavorable factors connected with transportation, frequently results in loss. By raising our own trees we have them available at all times and they have to be out of the ground only a few hours before they are planted again. It is estimated that trees can be grown on the city's watershed at a saving of 25 per cent. per tree. The nursery is located at Loch Raven and at present contains the following stock:

Species.	No.
Norway maple	900
Oriental sycamore	1,000
American elm	500
White ash	300
Total	2,700

These trees are being cared for by the superintendent of the County Division of the Water Department under the direction of the Division of Forestry. They will be sold to the Forestry Division at cost.

FORESTRY OPERATIONS ON THE CITY'S WATERSHED.

The Water Board has decided, together with other improvements in the Gunpowder Valley, to afforest those watershed areas which directly affect the drainage in the valley. Although much of this land is rich agricultural soil it is necessary to put it under forest cover to prevent erosion and the consequent silting of the reservoir. The protection afforded will also mean purer water and the gradual "paying out" or equalization of the flow—a condition which is desirable. Incidentally, an attractive woodland can be formed, which may eventually be lumbered at a profit. The Division acts as an advisory office to the Water Board and the plans drawn up are put into operation by the superintendent of the County Division. A "planting plan" has been drawn up covering four hundred and forty acres of the area. This plan will be carried out as rapidly as possible.

The old woodlands on the watershed will also be given attention. Forest thinnings in the young hardwood growths and damage cuttings in the older timber will constitute the chief operations in the woodland. In connection with the planting on the watersheds, a small amount of stock will be held in the Water Department's nursery. This nursery will be used to hold over evergreen stock (white pine and Norway spruce) to be used in filling failures and a small amount of hardwood stock (such as tulip, ash and red oak) to be raised to a size best adapted to successful planting.

FINANCIAL STATEMENT.

The following are the appropriations, expenditures and balance on hand January 1, 1914:

Appropriated for expenses	$5,000 00
Credit items	63 55
Total	$5,063 55

EXPENDITURES.

Tools	$978 03	
Labor	2,217 39	
Team hire and soil	854 83	
Miscellaneous	157 14	
Nursery stock	499 20	
Spraying materials	119 00	
Office fixtures	101 34	
Salary (clerk)	126 66	
Total		5,053 59
Unexpended balance		$9 96

Respectfully submitted,

R. BROOKE MAXWELL,
City Forester.

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ANNUAL REPORT OF THE COMPTROLLER OF BALTIMORE CITY

FOR THE FISCAL YEAR ENDED DECEMBER 31
1913

1797

ARRANGED IN ACCORDANCE WITH THE
UNIFORM SYSTEM OF ACCOUNTING OF
THE NATIONAL MUNICIPAL LEAGUE

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PUBLIC PRINTER
1914

COMPTROLLER'S DEPARTMENT

James F. Thrift, *Comptroller.*
W. T. Childs, *Deputy Comptroller.*

OFFICE.

Chief Clerk and General Bookkeeper	Joseph S. Clarke.
Auditor and Market Master - -	Samuel K. Thomas.
Auditor and Harbor Master -	M. Frank Fitzpatrick.
Assistant Clerk and Inspector of Weights and Measures - - -	George A. Donoghue.
License and Market Detective (Cashier) - - - - -	William L. Glascock.
Clerk - - - - - - -	C. Roland Stallings.
Clerk - - - - - -	Richard K. Thursby.
Stenographer and Clerk - - -	Victorine K. Robertson.
Stenographer - - - -	Dorothy M. Murphy.

CITY STOREKEEPER.

City Storekeeper - - - -	Charles Wilson.

ASSISTANT MARKET MASTERS.

Belair Market - - - - -	James Dean.
Canton Market - - - -	Henry Bewig.
Centre Market - - - - -	Thomas E. Jacobs.
Cross Street Market - - -	Timothy M. Kelly.
Fells Point Market - - - -	Edward I. Novak.
Hanover Market - - - -	John C. Dietz.
Hollins Market - - - - -	George N. Schaefer.
Lafayette Market - - - -	Louis Kuhl.
Lexington Market - - - -	John C. McLaughlin.
Northeast Market - - - -	George W. Champness.
Richmond Market - - - -	George W. Wells.

ASSISTANT HARBOR MASTERS.

First District - - - -	Michael Feller.
Second District - - - -	George J. Mueller.
Third District - - - -	Jesse F. Hall.
Fourth District - - - -	William Durm.
Fifth District - - - -	Robert Snyder.

INSPECTORS OF WEIGHTS AND MEASURES.

First District - - - - -	J. A. Haeffner.
Second District - - - -	Joseph Lynch.
Third District - - - - -	Joseph J. Lanahan.
Fourth District - - - -	John Brendel.
Inspector of Dry Measures - -	Charles Volk.
Inspector-at-Large - - -	Charles J. Silverson.

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ANNUAL REPORT

OF THE

COMPTROLLER

DEPARTMENT OF FINANCE

COMPTROLLER'S OFFICE

CITY HALL

BALTIMORE, June 1, 1914.

To the Honorable the Mayor and City Council of Baltimore.

GENTLEMEN:

Herewith I respectfully submit the report of the finances of all departments of the City of Baltimore for the year 1913, showing, in detail, the receipts, expenditures, assets and liabilities as of December 31, 1913.

PART I contains "The Ordinance of Estimates for the Year 1913," reproduced for convenient reference.

PART II embraces the receipts, appropriations and expenditures for the year, arranged, as explained in the key immediately preceding Schedule A-1, in accordance with the uniform system of accounting of the National Municipal League.

PART III is a statement of active loans.

PART IV gives the assets and liabilities, taxable basis and other financial data, an explantory statement of which immediately precedes Schedule B-I.

NUMBER OF VOUCHERS.

During the year 19,391 pay warrants were issued, representing an expenditure of $24,381,195.65. The receipts were $23,378,116.70, evidenced by 748 receipt warrants.

DISCOUNTING BILLS.

The plan instituted by this Department for discounting bills saved the city $6,036.84 during 1913.

CITY PROPERTY INSURANCE FUND.

The "City Property Insurance Fund," referred to in my report for 1912, was created by Ordinance No. 408, approved February 21, 1914. It is believed that the creation of this fund will ultimately save the city a large sum of money, which is now expended for insuring city property.

REVISION OF CITY'S ACCOUNTING SYSTEM.

The agitation which has arisen from time to time for some years in regard to revising the city's accounting system resulted in the appointment by the Board of Estimates of a committee to study the subject. The committee consists of the City Comptroller, as chairman; the City Register, one of the judges of the Appeal Tax Court, the director of the Bureau of State and Municipal Research, and a representative of the audit company to which the contract was awarded for auditing the city's accounts for 1914. It is hoped that the work of the committee will be completed in time to institute, with the beginning of 1915, any changes which may be found advisable and practicable.

During the year two reports were made by the director of the Bureau of State and Municipal Research on the method of compiling and arranging the Comptroller's annual report. These reports carried with them several recommendations which, if put into practice, would no doubt improve the present system. The recommendations will be considered in connection with the work which has been undertaken by the committee above referred to.

A sub-committee, consisting of the Comptroller and the City Register, visited Pittsburgh, Chicago and Cleveland, and reported its findings to the Mayor as follows:

"The city of Pittsburgh is now engaged in the process of installing, for its municipal accounting, the system advocated by the New York Bureau of Municipal Research. Its late system of accounts has been in operation for the past twenty-five years, and it is proposed to displace entirely the old system by the new. The committee of business men appointed during the late administration by Mayor Mahool, to investigate our own accounting, recommended the system then advocated by the New York Bureau of Municipal Research, which, however, has probably undergone some change since that time.

"It was not deemed advisable, at the time the New York system was recommended by the Mahool committee, to abolish the existing system and supplant it with the new, and it is the opinion of this committee that the entire displacement of the present system by one that is radically different, would not be advisable now.

"We found at Chicago, that several years ago they substituted for their old method of accounting, a new municipal system. This system cost the city to install, all told, about $200,000, and we were informed that since that time a great portion of it has been abandoned. It is the opinion of the Chicago Comptroller's Department that the net result that now obtains could have been accomplished by a sensible revision of their former system, by their own and other competent accountants, at an expense of less than $10,000.

"At Cleveland we found them actively engaged in remodeling and extending their accounting system in very much the same manner that this committee recommends that the work be done here.

"Whilst we were not entirely unacquainted with the system in Philadelphia, it was planned that we should stop there, but we concluded to defer this examination on account of the failure of Mr. Chase to join us, and because the visit to Philadelphia could easily be made later, at some time when Mr. Chase could accompany us.

"In regard to the detail of the systems which we examined, we found in every instance that the accounts of the comptroller embraced all of the accounts of the lower departments, and that accounts were kept in full detail though not always to the minute extent in which they are kept in the lower departments. We found no instance where accounts were skeletonized in either the comptroller's or the lower departments. In some instances there was even a triplication of accounts.

"As compared with what we have seen, our own system, as a whole, has much to recommend it. It is not only acceptable in the main, but aside from the recommendations of the Baltimore Audit Company, and the suggestions of this committee, which will follow, needs little fundamental changing. There is more to be done in some departments than in others, but we believe all can be readily accomplished in our own time and at moderate expense.

"As the result of our observations, thus far, we submit the following suggestions:

"That there be installed in the Comptroller's Department accounts of the contractual obligations of the city with credits as payments are made, so as to show at all times the city's immatured obligations thereon: That similar accounts be kept in the lower departments with regard to purchases not under definite contract, so as to show the departmental floating debt: That in addition to the present controlling accounts in the Comptroller's department, others be installed to embrace all accounts of receipts and disbursements of the lower departments, and that controlling accounts be kept in like manner in the lower departments: That a complete classification of accounts be adopted, and that the same be standardized throughout all the departments: That a general auditor be appointed to install changes under the direction of the committee and to ultimately establish a distinct and independent department to carry on the work now being done by certified public accountants under contract.

"Certain changes, which these suggestions are intended to embrace, cannot be made without legislative authority, and obviously this should be obtained, if possible, from the Legislature now in session.

"We are aware of many needed improvements of lesser import that have not been referred to here, but which would naturally be taken care of in a revision, as would any others that might become manifest as such work progresses.

"It may not be out of place to make some reference to the system of checking, auditing and paying bills, and the drawing and issuing of vouchers and warrant-checks, which has lately been installed in the departments of the Comptroller and the City Register. Not only has this system worked satisfactorily and without obstruction in a single instance, but we have seen no other system that would accomplish our purpose quite so well, or that would suggest any improvement in the one we have established, and which we understand has since been adopted elsewhere.

"Municipal accounting may be carried to an indefinite extent, and may be made to exhibit information upon every line of thought that could be suggested, and even then it might not be free from criticism from some quarter. However, with rational development of, and addition to the system we have in operation, we believe it will compare favorably with the most modern and acceptable that we have seen."

In this connection I call attention to my suggestion in my report for 1912, that the city's accounting system be enlarged in order that the

Comptroller's ledger may show not only the appropriations and expenditures, as at present, but also the unincumbered balances of all appropriations and all outstanding credits and debits of the city.

I also suggested last year that the city adopt the principle of "scientific budget making."

This Department, however, is unable, with its limited force and the constantly increasing work, to undertake to put into effect many of the changes which it believes should be made.

PROPERTY LEDGER.

The work of preparing a property ledger was almost completed during the year, and when complete will give a record, historical and financial, of all property owned by the city.

SUPERINTENDENT.

Provision was made in "The Ordinance of Estimates for the year 1914" for the appointment of a superintendent to have general supervision over the sub-department, Department of Weights and Measures, the Harbor Masters and the eleven municipal markets. The creation of such an office by the Board of Estimates was made necessary by reason of the fact that there has never been adequate supervision of what may be called the outside work of the Comptroller's Department.

NEW MARKET ORDINANCE.

The legality of Ordinance No. 332, approved July 25, 1913, making changes in the market rates and regulations, was sustained by the Court of Appeals in an opinion filed May 6, 1914. While this is a legal victory for the city, it is my opinion that the outcome of the litigation means the prolonged life of the municipal markets, for with the increased revenue the city will be justified in making many needed improvements to the market structures. The increased rates cannot be seriously said to impose a hardship upon the market people, when it is realized that the increase upon the butcher stalls amounts only to eleven cents a market day and on all other kinds of stalls to less than one cent a market day.

DEPARTMENT OF WEIGHTS AND MEASURES.

As an evidence of the thorough and efficient work of the several inspectors of the Department of Weights and Measures, fewer complaints of short weights and false measures were received in the Comptroller's office from consumers during 1913 than during any previous period of the present administration. For the first time in the history of the Department, the inspectors were shifted in the various districts. The effect of the change was good. It made it possible for the inspectors to check up the work done by their predecessors.

CITY STOREKEEPER.

The new City Storekeeper's Department is being put into operation. For the present it is under the Comptroller's supervision. This department promises to be a money saver to the city as the result of systematizing and standardizing supplies and purchasing in bulk, instead of individual departmental action, as heretofore. Mr. Charles Wilson, formerly connected with the Storekeeper's Department of the Baltimore and Ohio Railroad Company, was appointed City Storekeeper last fall.

EFFICIENT FORCE.

It is with much pride and pleasure that I can refer again to the continued efficiency and loyalty of each member of the Department throughout the year. The work of the Department is constantly enlarging, with the increased activities of all the city departments, and it is gratifying that the force have, without exception, thoroughly and faithfully discharged their duties.

Very respectfully,

James F. Thrift, *Comptroller.*

PART I

THE
ORDINANCE OF ESTIMATES
FOR THE YEAR
1913

THE
ORDINANCE OF ESTIMATES
FOR THE YEAR 1913

In accordance with the provisions of the New Charter of Baltimore City (Sections 36 to 40, inclusive), the following three lists, for the use of the Mayor and City Council of Baltimore for the year 1913, were presented by the Board of Estimates to the City Council, and were duly passed and approved by the Mayor on December 11, 1912. (Ordinance No. 201.)

LIST No. 1

Departmental Estimates

INSPECTOR OF BUILDINGS.

Salaries	$60,360 00	
Repairs to city property (consolidated)	161,700 00	
Contingencies (to be expended only upon written orders from the Board of Estimates)	20,000 00	
Emptying cesspools	300 00	
Livery and transportation	1,800 00	
Incidentals	400 00	
		$244,560 00

COMMISSIONER OF STREET CLEANING.

Salaries	$26,840 00	
Street carts and men	140,400 00	
Sweepers and scrapers	193,440 00	
Foremen	19,188 00	
Sweeping machines and sprinklers	63,634 00	
Cleaning sewers and inlets	37,368 00	
Tools, repairs, etc.	8,085 00	
Incidental expenses	2,720 00	
Removal of garbage	66,500 00	
Collection of ashes and garbage	227,483 22	
Removal and disposition of non-perishable waste	25,000 00	
Emergency Fund (to be expended by permission of the Mayor upon request of Commissioner of Street Cleaning for removal of snow, ice, etc.)	10,000 00	
Destruction of weeds, grass, etc.	2,000 00	
		822,658 22

The Board of Estimates reserves the right at any time during the year to use part of the appropriation for one or more items for another or other items upon request of the Commissioner of Street Cleaning.

SUPERINTENDENT OF LAMPS AND LIGHTING.

Salaries	$16,788 00	
Gas lighting and maintenance	179,742 60	
Electric lighting and maintenance	257,340 81	
Naphtha lamps and maintenance	9,312 00	
Incidentals	350 00	
		$463,533 41

HARBOR BOARD.

Salaries	$6,130 00	
Dredging harbor	55,277 00	
Iceboats	23,430 00	
Repairs to wharves, piers and bulkheads	7,300 00	
Light Street Bridge, salaries and maintenance	16,619 00	
Removal of ashes	1,100 00	
Removal of floating matter	1,935 00	
Incidentals	500 00	
		112,291 00

COMMISSIONER OF HEALTH.

Salaries	$131,780 00	
Expenses	32,950 00	
Abatement of nuisances	1,000 00	
Tuberculosis dispensary	6,000 00	
Quarantine, salaries	13,525 00	
Quarantine, expenses	7,350 00	
Sydenham Hospital, salaries	10,160 00	
Sydenham Hospital, expenses	10,650 00	
		213,415 00

BOARD OF FIRE COMMISSIONERS.

Salaries	$764,335 00	
Expenses	193,350 00	
Pensions, firemen's widows	5,425 00	
		963,110 00

CITY COLLECTOR.

Salaries	$74,900 00	
Expenses	5,855 00	
		80,755 00

CITY ENGINEER.

Salaries	$43,880 00	
To be taken from estimated receipts from Commissioner of Motor Vehicles:		
Expenses	19,400 00	
To be taken from tax levy:		
Expenses	423,250 00	
Emergency Fund (to be expended only upon written orders of the Board of Estimates)	10,000 00	
		496,530 00

APPEAL TAX COURT.

Salaries	$67,600 00	
Expenses	2,285 00	
		69,885 00

BOARD OF LIQUOR LICENSE COMMISSIONERS.

Salaries	$13,300 00	
Expenses	3,300 00	
		16,600 00

COMMISSIONERS FOR OPENING STREETS AND ANNEX IMPROVEMENT COMMISSION.

Salaries	$9,900 00	
Expenses	500 00	
		$10,400 00

BOARD OF SUPERVISORS OF ELECTIONS.

Salaries	$15,000 00	
Expenses	3,461 00	
Registration, fall	49,990 00	
Primary, fall	33,710 00	
General election, fall	33,810 00	
		135,971 00

CITY LIBRARIAN.

Salaries	$5,272 00	
Expenses	23,900 00	
		29,172 00

SUPERINTENDENT OF PUBLIC BUILDINGS.

Salaries, City Hall	$17,660 00	
Expenses, City Hall	6,200 00	
Salaries, City Hall annexes	6,120 00	
Expenses, City Hall annexes	7,250 00	
Salaries, Court House	32,940 00	
Expenses, Court House	6,100 00	
Salaries, People's Court	2,880 00	
Expenses, People's Court	2,625 00	
		81,775 00

DIARY CITY COUNCIL.

Salaries	$47,750 00	
Expenses	11,935 00	
		59,685 00

MAYORALTY.

Salaries	$12,000 00	
Expenses	7,848 00	
		19,848 00

DEPARTMENT OF LEGISLATIVE REFERENCE.

Salaries	$3,140 00	
Expenses	550 00	
		3,690 00

MISCELLANEOUS GENERAL EXPENDITURES.

Contingent Fund	$50,000 00	
Coroners	9,000 00	
Board of Estimates	5,000 00	
Board of Public Improvements	600 00	
Transportation to the House of Correction	500 00	
General licenses	2,100 00	
Enoch Pratt Free Library, equipment and maintenance of branch libraries already established	36,500 00	
Care of habitual drunkards	3,000 00	
Special medical examinations	700 00	
Public Service Commission	8,800 00	
Municipal Telephone Exchange	15,358 00	
Baltimore Audit Company	8,500 00	
		140,058 00

LAW DEPARTMENT.

Salaries	$23,800 00	
Expenses	6,000 00	
Judgments and suits	18,000 00	
		$47,800 00

TOPOGRAPHICAL SURVEY.

Salaries	$13,260 00	
Expenses	2,015 00	
		15,275 00

FREE PUBLIC BATH COMMISSION.

Salaries	$45,436 00	
Expenses	27,017 00	
		72,453 00

BOARD OF SCHOOL COMMISSIONERS.

Salaries, office	$9,200 00	
Expenses, office	1,500 00	
Salaries, day schools	1,617,123 00	
Expenses, day schools	160,650 00	
Salaries, night schools	21,321 00	
Expenses, night schools	4,500 00	
Parental School	7,000 00	
Teachers' Retirement Fund	9,100 00	
New equipment	21,250 00	
For conducting vacation classes during summer of 1913	6,000 00	
		1,857,644 00

BOARD OF POLICE COMMISSIONERS.

Salaries	$1,200,522 47	
Expenses	65,125 00	
Pensioners	48,531 03	
		1,314,178 50

BOARD OF POLICE EXAMINERS.

Salaries	$4,800 00	
Expenses	1,302 00	
		6,102 00

SUPERVISORS OF CITY CHARITIES.

Office salaries	$8,860 00	
Office expenses	1,600 00	
Bay View Asylum, salaries	67,118 00	
Bay View Asylum, expenses	155,589 00	
Care of insane	171,500 00	
City patients in hospitals	75,379 00	
Destitute and neglected children	25,000 00	
Dispensary service	10,500 00	
Temporary care of homeless men	2,000 00	
Transportation of poor to their homes	1,000 00	
		518,546 00

COMPTROLLER.

Salaries	$16,900 00	
Expenses	2,500 00	
Assistant market masters	6,400 00	
Market cleaners and employes	9,100 00	
Inspectors of weights and measures	8,550 00	
Insurance on city property (to be used for insurance premiums and balance for insurance reserve)	10,000 00	
Hose for various markets	600 00	
		54,050 00

CITY REGISTER.

Salaries	$13,700 00	
Expenses	1,140 00	
State tax on city loans	101,871 28	
Ground rents on city property	45,000 00	
Advertising laws	2,000 00	
Enoch Pratt Free Library Fund	4,258 00	
Commissioners of Finance, expenses	2,500 00	
Interest on stock debt	2,700,655 47	
		$2,871,124 75

BALTIMORE CITY JAIL.

Salaries	$36,050 00	
Expenses	27,500 00	
		63,550 00

REFORMATORIES.

Maryland School for Boys:			
Maintenance	$7,800 00		
Manual training	6,500 00		
Repairs and improvements	5,000 00		
		$19,300 00	
St. Mary's Industrial School, maintenance, with privilege of using any unexpended balance for repairs, etc., in accordance with Act of the Assembly		46,000 00	
Industrial Home for Colored Girls:			
Maintenance	$6,000 00		
New improvements	1,500 00		
		7,500 00	
House of Good Shepherd, maintenance		6,320 00	
House of Good Shepherd for Colored Girls, maintenance		6,080 00	
Maryland Industrial School for Girls:			
Maintenance	$7,200 00		
Repairs to buildings	2,000 00		
		9,200 00	
House of Reformation for Colored Boys, maintenance		27,520 00	
National Junior Republic, maintenance		3,600 00	
Universal Progressive School for Orphan and Destitute Colored Children, maintenance		1,200 00	
Exeter Street Rescue Home for Women, maintenance		1,080 00	
Florence Crittenton Mission, maintenance		1,080 00	
The Boys' Home, maintenance		1,560 00	
			130,440 00

COURTS.

Salaries, court bailiffs, stenographers, etc.	$63,300 00
Expenses, Criminal Court	95,462 50
Expenses, Baltimore City Court	11,071 25
Expenses, Court of Common Pleas	7,393 70
Expenses, Superior Court	13,162 65
Expenses, Circuit Court	3,550 00
Expenses, Circuit Court No. 2	550 00
Salaries, Orphans' Court	10,016 00
Expenses, Orphans' Court	100 00
Salaries, Juvenile Court	11,700 00
Expenses, Juvenile Court	450 00

Salaries, Supreme Bench	$5,500 00	
Expenses, Supreme Bench	1,930 00	
Magistrates	21,400 00	
Trust Department, Supreme Bench	200 00	
Deficit, 1912, People's Court	39,248 01	
Salaries, People's Court	37,600 00	
Expenses, People's Court	500 00	
		$323,134 11

BOARD OF PARK COMMISSIONERS.

Salaries, office	5,288 00	
Expenses, office	2,000 00	
Salaries, parks and squares	245,549 50	
Expenses, parks and squares	274,538 00	
		527,375 50

ELECTRICAL COMMISSION.

To be taken from the tax levy:		
Operating and maintaining completed conduits, salaries	$10,700 00	
		10,700 00

COLLECTOR OF WATER RENTS AND LICENSES.

Salaries	$30,220 00	
Expenses	2,055 00	
Interest on water loans	415,000 00	
Sinking Fund on Water Loan of 1943	22,500 00	
		469,775 00

WATER DEPARTMENT.

Salaries	$106,920 00	
Expenses	536,770 00	
		643,690 00

MUNICIPAL FACTORY SITE COMMISSION.

Salaries	$3,280 00	
Expenses	2,720 00	
		6,000 00
Total List No. 1		$12,895,774 49

LIST No. 2

Estimates for New Improvements

INSPECTOR OF BUILDINGS.

To be taken from the tax levy:		
Municipal garage	$4,500 00	
Public comfort stations in markets	10,000 00	
To be taken from School House 1961 Loan:		
For completion of School No. 22	15,000 00	
For completion and equipment of Polytechnic Institute	64,000 00	
To be taken from the tax levy:		
For completion and equipment of Polytechnic Institute	200,000 00	
		$293,500 00

HARBOR BOARD.

To be taken from the Dock Improvement 1961 Loan:		
Public Wharves and Docks, salaries	$19,068 00	
Commercial and recreation pier	150,000 00	
		169,068 00

COMMISSIONER OF HEALTH.

Home for Superintendent of Sydenham Hospital	$5,000 00

BOARD OF FIRE COMMISSIONERS.

Fireboat "Cataract"	$65,000 00	
Tractors	16,000 00	
Chassis	30,000 00	
Hydrant heads	5,775 00	
Repair shop tools	4,000 00	
Automobiles	6,000 00	
Truck Company No. 18	7,425 00	
Extra work, pumping station	15,559 32	
Boiler, High Pressure Pumping Station	15,000 00	
		164,759 32

CITY ENGINEER.

Encasing lower members of Calvert Street Bridge in concrete	$7,000 00	
Paving Mulberry, Saratoga and Pulaski streets.	5,000 00	
Regrading, repaving, underpinning walls on Howard, Stockholm and Eutaw streets and neighboring streets, incident to construction of Stockholm Street Viaduct and widening Stockholm street	25,000 00	
Improvement on Baker street, from Seventh street westerly one hundred feet	1,090 00	
		38,090 00

COMMISSIONERS FOR OPENING STREETS AND ANNEX IMPROVEMENT COMMISSION.

To be taken from the tax levy:

Opening of Glover street, from Madison street to Monument street	$2,262 26
Opening of Creamer alley, from Barre street to Lee street	18,571 20
Opening of Little Greene street, from Barre street to Lee street	31,825 59
Opening of Riverside avenue, from Warren avenue to Hamburg street	23,818 43
For the expenses of widening Hillen street and Stockholm street	25,000 00
	$101,477 48

To be taken from the Annex Improvement 1951 Loan:

Salaries	$19,820 00
Opening of Montebello avenue, from Cokesbury avenue to the Baltimore and Ohio Railroad	22,059 08
Opening of Thirtieth street, from Calvert street to York road	17,818 99
Opening of Oak street, from University Parkway to Forest avenue	3,811 41
Opening of Thirty-first street, from St. Paul street to York road	300 33
Opening of Baker street, from western boundary line to Hilton street	7,864 69
Opening of Bartlett avenue, from Montebello avenue to Taylor avenue	7,808 79
For the acquisition, pursuant to Chapter 736, Acts of General Assembly of Maryland of 1910 and Ordinance No. 662 of the Mayor and City Council of Baltimore, approved April 13, 1911, and any other ordinance or ordinances now existing or that may be passed during the year 1913, by gift, purchase, lease (whatever the duration of the lease) or by other methods of acquisition or by condemnation of any private property whatsoever, including streets, avenues, lanes and alleys, rights or interests, franchises, privileges or easements that may be required to open, widen, extend, straighten, close, grade or pave any street, avenue, lane or alley or to broaden any sidewalks, and for the cost under said Act and ordinance of condemning, laying out, opening, extending, widening, straightening, closing, grading and paving streets, avenues,	

lanes and alleys or any parts thereof and of establishing and fixing the building lines and the widths of sidewalks or streets, avenue, lanes and alleys and for the cost under said Act and ordinance of exercising any further duties or powers imposed or conferred by the terms of said Act and ordinance or ordinances	$420,516 71		
Total from Annex Improvement 1961 Loan,		$500,000 00	
To be taken from the Jones Falls 1961 Loan:			
For opening, constructing and establishing a public highway over, along and near Jones Falls		500,000 00	
			$1,101,477 48

FREE PUBLIC BATH COMMISSION.

Addition to Gwynn's Falls Pool		5,000 00

BOARD OF SCHOOL COMMISSIONERS.

To be taken from the tax levy:		
Improved heating and ventilation of Schools Nos. 75, 12 and 8	$5,000 00	
For purchase of additional ground for School No. 27	3,303 89	
Lot for new parental school (or so much thereof as may be necessary)	5,000 00	
Additional amount needed for new building for No. 64 Branch	10,000 00	
New addition, School No. 50	5,000 00	
Playground and open-air classroom for School No. 76	7,500 00	
Additional yard space, School No. 106	4,000 00	
		39,803 89

SUPERVISORS OF CITY CHARITIES.

Bay View:		
Equipment and installation of fire-doors and other improvements to main building, to be expended under direction of Board of Estimates	$29,000 00	
Cow barns and stables	12,500 00	
Bungalow for physician of Tuberculosis Hospital	3,500 00	
		45,000 00

BOARD OF PARK COMMISSIONERS.

To be taken from the receipts of the Board of Park Commissioners:		
New improvements, general, including $50,000 for account of Thirty-third street, as per resolution of Board of Park Commissioners, November 20, 1912	$73,624 50	

To be taken out of the balance remaining December 31, 1912, from the proceeds of the loan ($1,000,000) authorized by Chapter 338 of the Acts of the General Assembly of Maryland of 1904 and ordinance of the Mayor and City Council of Baltimore No. 228, approved March 20, 1905:

For the acquisition, pursuant to said Act and ordinance by the Mayor and City Council of Baltimore, acting by and through the agency of the Board of Park Commissioners, by gift, purchase, lease (whatever the duration of the lease) or other like method of acquisition, or by condemnation of land or any interest, franchise, easement, right or privilege therein for the extension of the park system, including parked ways or roads of the City of Baltimore, and for the improvement of the land already acquired or to be acquired out of the proceeds of said loan or the balances thereof remaining unexpended on December 31, 1912, to the credit of each of the four sections of the city and suburbs indicated by the intersection of Charles and Baltimore streets:

Estimated balance in southwest section is	$27,415 95		
Estimated balance in northeast section is	18,936 15		
Estimated balance in southeast section is	73,059 17		
		$119,411 27	
			$193,035 77

ELECTRICAL COMMISSION.

To be taken from the Conduit 1962 Loan:		
Salaries	$17,200 00	
Construction	500,000 00	
		517,200 00

WATER DEPARTMENT.

To be taken from the tax levy:		
Work to be done in advance of improved paving by Paving Commission, State Roads Commission and Commissioners for Opening Streets	$93,000 00	
Auxiliary pumping station at Lake Ashburton for western upper service	10,500 00	
Cleaning mains in advance of filtration	15,000 00	
Pitometer survey for underground leaks	5,000 00	
Repairs to pumping stations	31,700 00	
		155,200 00
To be taken from Water 1958 Loan:		
Gunpowder Supply Improvement Division, salaries	$75,860 00	
Filtration Division, salaries	37,900 00	
To be used for expenditures in the extension of the water system under the Act	2,497,000 00	
		2,765,960 00

SEWERAGE COMMISSION.

To be taken from the New Sewerage Improvement 1961 Loan:		
Administration, salaries	$27,780 00	
Engineering force, salaries	273,640 00	
Sewerage Pumping Station, salaries	17,500 00	
Disposal Plant, salaries	23,876 00	
General city cement laboratory, salaries	7,400 00	
Repairing and cleaning sewers, laborers	18,000 00	
Sewerage Pumping Station, expenses	11,500 00	
Disposal Plant, expenses	6,000 00	
General city cement laboratory, expenses	500 00	
Repairing and cleaning sewers, expenses	2,000 00	
Special expenses	35,731 00	
Construction, expenses	2,600,000 00	
		$3,023,927 00

PAVING COMMISSION.

To be taken from the Paving 1951 Loan:	
For the cost and expenses in connection with the grading, paving and curbing, regrading, repaving and recurbing public streets, avenues, alleys and highways, in the City of Baltimore, including construction work, salaries and other expenditures	1,000,000 00

MUNICIPAL FACTORY SITE COMMISSION.

Municipal Journal	5,000 00
Total List No. 2	$9,366,821 46

LIST No. 3

Estimates for Annual Appropriations

BOARD OF FIRE COMMISSIONERS.

Mary A. McGraw (Ordinance No. 8, 1912)....	$400 00	
Lottie C. Curry (ordinance pending).........	300 00	
		$700 00

CITY ENGINEER.

Regrading, repaving and curbing Madison street, from the east side of Luzerne avenue to the west side of Grove alley (Ordinance No. 125, 1912)............................	$2,593 97	
Regrading, repaving and curbing Garrett street, from west side of Park avenue to the east side of Howard street (Ordinance No. 133, 1912)	2,600 00	
		5,193 97

BOARD OF SCHOOL COMMISSIONERS.

Fourth and final payment to Maryland School for the Blind, note dated June 16, 1909............................	75,116 66

SINKING FUNDS.

General Sinking Fund.......................	$60,979 15	
Funding 1936 Loan.........................	34,845 23	
Refunding 1940 Loan.......................	69,690 46	
Four Million 1945 Loan.....................	17,422 61	
Water 1916 Loan...........................	69,690 46	
Water 1922 Loan...........................	17,422 62	
Water 1926 Loan...........................	34,845 23	
Water 1958 Loan...........................	38,000 00	
Water 1943 Loan...........................	22,500 00	
Conduit 1922 Loan.........................	34,845 23	
Conduit 1928 Loan.........................	34,845 23	
Conduit 1958 Loan.........................	7,600 00	
Public Improvement 1940 Loan..............	69,690 46	
Internal Improvement 1928 Loan............	104,535 69	
Burnt District 1954 Loan...................	69,690 46	
Burnt District Improvement 1960 Loan.......	7,600 00	
Dock Improvement 1961 Loan................	15,200 00	
Annex 1954 Loan...........................	17,500 00	
Annex Improvement 1951 Loan..............	29,500 00	
New Sewerage 1980 Loan...................	37,000 00	
New Sewerage 1961 Loan...................	76,000 00	
New Engine House 1957 Loan...............	8,800 00	
New School House 1957 Loan...............	8,800 00	
School House 1961 Loan....................	11,400 00	
Public Park Improvement 1955 Loan.........	8,800 00	
Jones Falls Improvement 1961 Loan.........	7,600 00	
Paving 1951 Loan..........................	59,000 00	
Conduit 1962 Loan.........................	15,200 00	
		989,002 83

BOARD OF PARK COMMISSIONERS.

Purchase of property for an addition to Gwynn's Falls Park and a North avenue entrance to said park (Ordinance No. 172, 1912)		$36,000 00

MISCELLANEOUS ANNUAL APPROPRIATIONS.

Maryland Institute	$12,000 00	
Children's Playground Association	14,000 00	
Veteran Volunteer Firemen's Association	1,000 00	
Municipal Games, Patterson Park	500 00	
Pension, W. H. War	260 00	
Public Athletic League	3,000 00	
Maryland Workshop for the Blind	5,000 00	
Library Company of the Baltimore Bar	2,500 00	
West Park Recreation Center	1,000 00	
Memorial to Ferdinand Claiborne Latrobe	5,000 00	
		44,260 00
Total List No. 3		$1,150,273 46

SUMMARY.

Total List No. 1	$12,895,774 49
Total List No. 2	9,366,821 46
Total List No. 3	1,150,273 46
Total Appropriations	$23,412,869 41

SUMMARY OF APPROPRIATIONS

Departments.	List No. 1.	List No. 2.
Appeal Tax Court	$69.885 00	
Board of Fire Commissioners	963,110 00	$164,759 32
Board of School Commissioners	1,857,644 00	39,803 89
Board of Police Commissioners	1,314,178 50	
Board of Police Examiners	6,102 00	
Board of Park Commissioners	527,375 50	193,035 77
Collector of Water Rents and Licenses	469,775 00	
Courts	323,134 11	
City Register	2,871,124 75	
City Collector	80,755 00	
City Librarian	29,172 00	
City Engineer	496,530 00	38,090 00
Commissioners for Opening Streets	10,400 00	1,101,477 48
Commissioner of Health	213,415 00	5,000 00
Commissioner of Street Cleaning	822,658 22	
Comptroller	54,050 00	
Diary City Council	59,685 00	
Department of Legislative Reference	3,690 00	
Electrical Commission	10,700 00	517,200 00
Free Public Bath Commission	72,453 00	5,000 00
Harbor Board	112,291 00	169,068 00
Inspector of Buildings	244,560 00	293,500 00
Liquor License Commission	16,600 00	
Law Department	47,800 00	
Mayoralty	19,848 00	
Municipal Factory Site Commission	6,000 00	5,000 00
Miscellaneous Annual Appropriation		
Miscellaneous General Expenditures	140,058 00	
Paving Commission		1,000,000 00
Reformatories	130,440 00	
Superintendent of Lamps and Lighting	463,533 41	
Supervisors of City Charities	518,546 00	45,000 00
Supervisors of Elections	135,971 00	
Superintendent of Public Buildings	81,775 00	
Sewerage Commisison		3,023,927 00
Sinking Funds		
Topographical Survey	15,275 00	
Visitors to the Jail	63,550 00	
Water Department	643,690 00	2,765,960 00
Total	$12,895,774 49	$9,366,821 46

BY DEPARTMENTS FOR 1913.

List No. 3.	Total.	From Levy, Etc.	From Loans.	Total Appropriations for 1912.
....	$69,885 00	$69,885 00	....	$60,850 00
$700 00	1,128,569 32	1,128,569 32	....	1,089,780 00
75,116 66	1,972,564 55	1,972,564 55	....	2,103,137 75
....	1,314,178 50	1,314,178 50	....	1,272,121 26
....	6,102 00	6,102 00	....	6,102 00
36,000 00	756,411 27	637,000 00	$119,411 27	549,737 05
....	469,775 00	469,775 00	....	463,575 00
....	323,134 11	323,134 11	....	235,518 10
....	2,871,124 75	2,871,124 75	....	2,638,496 30
....	80,755 00	80,755 00	....	76,268 00
....	29,172 00	29,172 00	....	27,515 00
5,193 97	539,813 97	539,813 97	....	602,239 23
....	1,111,877 48	111,877 48	1,0000,000 00	1,011,460 81
....	218,415 00	218,415 00	....	203,105 00
....	822,658 22	822,658 22	....	822,658 22
....	54,050 00	54,050 00	....	49,700 00
....	59,685 00	59,685 00	....	63,447 00
....	3,690 00	3,690 00	....	3,690 00
....	527,900 00	10,700 00	517,200 00	229,000 00
....	77,453 00	77,453 00	....	88,599 00
....	281,359 00	112,291 00	169,068 00	1,157,959 00
....	538,060 00	459,060 00	79,000 00	391,666 18
....	16,600 00	16,600 00	....	17,400 00
....	47,800 00	47,800 00	....	48,000 00
....	19,848 00	19,848 00	....	14,848 00
....	11,000 00	11,000 00	....	6,000 00
44,260 00	44,260 00	44,260 00	....	40,260 00
....	140,058 00	140,058 00	....	138,858 00
....	1,000,000 00	....	1,000,000 00	1,000,000 00
....	130,440 00	130,440 00	....	122,380 00
....	463,533 41	463,533 41	....	395,839 98
....	563,546 00	563,546 00	....	572,118 00
....	135,971 00	135,971 00	....	156,003 00
....	81,775 00	81,775 00	....	88,900 00
....	3,023,927 00	....	3,023,927 00	4,596,881 00
989,002 83	989,002 83	989,002 83	....	948,271 07
....	15,275 00	15,275 00	....	13,995 00
....	63,550 00	63,550 00	....	64,150 00
....	3,409,650 00	798,890 00	2,610,760 00	2,209,510 00
$1,150,273 46	$23,412,869 41	$14,893,503 14	$8,519,366 27	$23,580,038 95

SUMMARY OF THE ESTIMATES OF RECEIPTS FOR THE YEAR 1913

TAXES.

Tax arrearages	$925,000 00	
Tax on securities	521,513 13	
Tax on suburban property	190,369 31	
Tax on rural property	153,557 39	
Tax on savings banks deposits	172,725 00	
Interest on taxes	75,000 00	
Penalties	45,000 00	
		$2,083,164 83
Miscellaneous sources		3,621,321 68
Board of Park Commissioners		756,411 27
Board of School Commissioners		516,000 00
Courts		10,000 00
Department of Charities and Corrections		25,060 00
Interest on stock debt (Water Board, Park Board and Commissioners of Finance)		646,365 00
City Engineer's Department (motor vehicle licenses and fines)		19,400 00
Sale of city stock		8,699,955 00
Sinking funds (Water Board and Park Board)		31,300 00
		$16,408,977 78

RECAPITULATION

Estimated amount necessary for the maintenance of the city government for the year 1913, as appropriated by the Ordinance of Estimates for the year 1913	$23,412,869 41
Estimated receipts from licenses, fees, rents and all other charges, including the amount believed to be collectible from taxes in arrears and also from taxes at fixed rates for the year 1913	16,408,977 78
Amount to be raised by taxation at the full rate	$7,003,891 63

Estimating 82½ per cent. collectible on $422,366,449, this representing property assessable at full rate, or $348,452,320, the Board of Estimates, on November 26, 1912, stated a tax rate of $2.01 per $100 for the fiscal year 1913 would be necessary to produce the difference between the anticipated expenditures and receipts of the city, the product of the same being $7,003,891.63.

Table Showing Apportionment of Taxes to be Raised by Taxation at Full Urban Rate of $2.01 Per $100 for the Year 1913.

TAXES	TAXABLE BASIS OF PROPERTY ASSESSABLE AT FULL RATE	RATE Per $100	Per Cent. Collectible	PRODUCT OF SAME	AMOUNT REQUIRED	EXCESS	DEFICIENCY
General	$422,366,449.00	$.22$\frac{6}{8}$	.82$\frac{1}{2}$%	$ 792,729.03	$ 794,543.17		$1,814.14
Schools	"	.41$\frac{1}{8}$	"	1,433,010.17	1,432,714.55	$ 295.62	
Police	"	.32$\frac{6}{8}$	"	1,141,181.35	1,140,830.50	350.85	
Charities and Corrections	"	.18$\frac{1}{8}$	"	631,569.84	632,576.00		1,006.16
Interest on Stock Debt	"	.51	"	1,777,106.84	1,774,940.47	2,166.37	
Courts	"	.07$\frac{6}{8}$	"	270,050.55	270,584.11		533.56
General Sinking Fund	"	.01$\frac{3}{4}$	"	60,979.15	60,979.15		
Funding 1936 Loan Sinking Fund	"	.01	"	34,845.23	34,845.23		
Refunding 1940 Loan Sinking Fund	"	.02	"	69,690.46	69,690.46		
Four Million 1945 Loan Sinking Fund	"	.00$\frac{1}{2}$	"	17,422.61	17,422.61		
Water 1916 Loan Sinking Fund	"	.02	"	69,690.46	69,690.46		
Water 1922 Loan Sinking Fund	"	.00$\frac{1}{2}$	"	17,422.62	17,422.62		
Water 1926 Loan Sinking Fund	"	.01	"	34,845.23	34,845.23		
Conduit 1922 Loan Sinking Fund	"	.01	"	34,845.23	34,845.23		
Conduit 1928 Loan Sinking Fund	"	.01	"	34,845.23	34,845.23		
Public Improvement 1940 Loan Sinking Fund	"	.02	"	69,690.46	69,690.46		
Internal Improvement 1928 Loan Sinking Fund	"	.03	"	104,535 69	104,535.69		
Burnt District 1954 Loan Sinking Fund	"	.02	"	69,690.46	69,690.46		
Burnt District Impr. 1960 Loan Sinking Fund	"	.09$\frac{6}{8}$	"	339,741.02	7,600.00	541.02	
Water 1958 Loan Sinking Fund					38,000.00		
Dock Improvement 1961 Loan Sinking Fund					15,200.00		
Conduit 1958 Loan Sinking Fund					7,600.00		
Annex 1954 Loan Sinking Fund					17,500.00		
Annex Improvement 1951 Loan Sinking Fund					29,500.00		
New Sewerage 1980 Loan Sinking Fund					37,000.00		
New Sewerage 1961 Loan Sinking Fund					76,000.00		
New Engine House 1957 Loan Sinking Fund					8,800.00		
New School House 1957 Loan Sinking Fund					8,800.00		
School House 1961 Loan Sinking Fund					11,400.00		
Jones Falls Imp. 1961 Loan Sinking Fund					7,600.00		
Paving 1951 Loan Sinking Fund					59,000.00		
Conduit 1962 Loan Sinking Fund					15,200.00		
Total	$422,366,449.00	$2.01	.82$\frac{1}{2}$%	$7,003,891.63	$7,003,891.63	$3,353.86	$3,353.86

PART II

Receipts, Appropriations and Expenditures

FOR THE

FISCAL YEAR ENDED DECEMBER 31, 1913

SCHEDULES A

Receipts, Appropriations and Expenditures

of the City of Baltimore, for the Fiscal Year 1913

EXPLANATORY.

Schedule A-I is a consolidated statement of the total receipts from all sources and the expenditures for all purposes for the fiscal year. It includes all financial transactions of the city which enter into the debits and credits of the year, together with the cash balances at the beginning and end of the year.

Schedule A-I*a* is a consolidated statement of the Comptroller's ledger, as of December 31, 1913, according to city departments. This statement is published monthly in the *Municipal Journal.*

Schedule A-II gives the large items which make up the total receipts, as per Schedule A-I, arranged to conform with "Estimates of Receipts to Apply on Appropriations for the Year 1913."

Schedule A-III gives the large items which make up the total expenditures, as per Schedule A-I.

Schedule A-IV divides the total receipts, expenditures and appropriations into four distinct heads: "Ordinary," Extraordinary," Trust Funds" and "Temporary Accounts."

Schedule A-V sub-divides into ten groups, according to general purposes or functions, the "Ordinary," Extraordinary" and "Appropriations" items of Schedule A-IV.

Schedule A-VI expands the ten groups of Schedule A-V into various divisions.

Schedule A-VII takes up the entire budgetary activities, including balances brought forward, appropriations, receipts, transfers, expenditures and the balances remaining at the close of the year, and the disposition of the latter. This schedule is a digest of the Comptroller's ledger.

Schedule A-VIII consists of the ultimate details of each department's accounts, sufficient space being allowed that all the important divisions of expenditure may be completely set forth. The gross receipts of each sub-division are also shown.

It will be seen that the schedules progress consistently and steadily from the gross statements to the details, each succeeding schedule being an amplification of the preceding one and in complete harmony with it, and all arranged upon a definite, consistent and uniform system.

SCHEDULE A—1.

Consolidated Statement of Cash Balances, Receipts and Expenditures of the Fiscal Year 1913.

NAME OF ACCOUNT.	Cash Balance Certified by City Depositories, Jan. 1, 1913.	Receipts, Jan. 1 to Dec. 31, 1913.	Total.	Expenditures, Jan. 1 to Dec. 31, 1913.	Cash Balances Certified by City Depositories, Dec. 31, 1913.
Mayor and City Council of Baltimore account	$2,641,771 52	$23,378,116 70	$26,019,888 22	$24,381,195 65	$1,638,692 57
City Register, in trust, property sold for taxes	284 86	1,205 99	1,490 85	92 74	1,398 11
Commissioners of Finance	16,231 57	2,231,676 05	2,247,907 62	2,210,665 88	37,241 74
Total	$2,658,287 95	$25,610,998 74	$28,269,286 69	$26,591,954 27	$1,677,332 42

SCHEDULE

Consolidated Statement of the Accounts of the Mayor and City as of Decem

JAMES F. THRIFT, Comptroller.

Compiled by JOSEPH S. CLARKE,

DEPARTMENT OR BOARD.	Appropriation for 1913.	Brought Forward from 1912.	Total Credit, Jan. 1, 1913.
Appeal Tax Court	$69,885 00	....	$69,885 00
Board of Fire Commissioners	1,128,569 32	$45,043 52	1,173,612 84
Board of School Commissioners	1,972,564 55	989,824 13	2,962,388 68
Board of Police Commissioners	1,314,178 50	2,568 76	1,316,747 26
Board of Police Examiners	6,102 00	....	6,102 00
Board of Park Commissioners	756,411 27	119,411 26	875,822 53
Collector of Water Rents and Licenses	469,775 00	....	469,755 00
Courts	323,134 11	....	323,134 11
City Register	2,871,124 75	6,475 23	2,877,599 98
City Collector	80,755 00	....	80,755 00
City Librarian	29,172 00	....	29,172 00
City Engineer	539,813 97	82,217 38	622,031 35
Commissioners for Opening Streets	1,111,877 48	216,622 78	1,328,500 26
Commissioner of Health	218,415 00	35,156 74	253,571 74
Commissioner of Street Cleaning	822,658 22	....	822,658 22
Comptroller	54,050 00	....	54,050 00
Diary City Council	59,685 00	....	59,685 00
Department of Legislative Reference	3.690 00	....	3,690 00
Electrical Commission	527,900 00	....	527,900 00
Free Public Bath Commission	77,453 00	8.703 85	86,156 85
Harbor Board	281,359 00	1,016,098 13	1,297,457 13
Inspector of Buildings	538,060 00	40.321 37	578,381 37
Liquor License Commission	16,600 00	....	16,600 00
Law Department	47,800 00	....	47,800 00
Mayoralty	19,848 00	....	19,848 00
Municipal Factory Site Commission	11,000 00	....	11,000 00
Miscellaneous Annual Appropriation	44,260 00	2,000 00	46,260 00
Miscellaneous General Expenditures	140,058 00	....	140,058 00
Paving Commission	1,000,000 00	830,133 60	1,830,133 60
Reformatories	130,440 00	500 00	130,940 00
Superintendent of Lamps and Lighting	463,533 41	....	463,533 41
Supervisors of City Charities	563.546 00	61,064 82	624,610 82
Supervisors of Elections	135,971 00	....	135,971 00
Superintendent of Public Buildings	81,775 00	....	81,775 00
Sewerage Commission	3,023,927 00	2,876,740 92	5,900,667 92
Sinking Funds	989,002 83	....	989,002 83
Topographical Survey	15,275 00	....	15,275 00
Visitors to the Jail	63,550 00	....	63,550 00
Water Department	3,409,650 00	117,108 40	3.526,758 40
Miscellaneous	....	....	....
Total (A-I)	$23,412,869 41	$6,449,990 89	$29,862,860 30

*Excess of expenditures over total credits, due to receipts from outside sources and transfers from the Contingent Fund. Detail explanation will be given in Comptroller's Annual Report for 1913.

†Not included in total receipts, but in cash balance, January 1, 1913.

Reproduced from the *Municipal Journal* of January 23, 1914.

A—I*a*.

Council of Baltimore, According to the City Comptroller's Ledger, ber 31st, 1913.

W. T. CHILDS, Deputy Comptroller.

Chief Clerk and General Bookkeeper.

Expended, Jan. 1 to Dec. 31, 1913.	Sources of Estimated Receipts for 1913.	Estimated Receipts for 1913.	Receipts, Jan. 1, to Dec. 31, 1913.
$69,583 29	Taxation	$9,087,056 46	$9,568,073 10
1,093,099 01	Abatement of Nuisances	1,000 00	1,535 24
2,802,652 66	Fire Commissioners (old material)	1,000 00	2,830 46
1,306,117 68	City Engineer (old material)	2,000 00	9,663 57
5,721 50	City Librarian	100 00	94 00
639,193 80	Commissioner of Street Cleaning (refuse)	2,500 00	6,389 97
468,485 53	Dog Licenses and Fines	7,500 00	24,003 71
281,328 26	Electrical Conduits	125,000 00	120,800 46
*2,985,415 72	Free Public Bath Commission	21,000 00	22,229 84
*82,596 68	General Licenses	91,000 00	99,017 20
*29,521 44	Interest on Deposits	80,000 00	65,751 00
*790,865 80	Liquor Licenses	1,100,00 00	996,516 31
561,231 37	Markets	65,000 00	60,183 12
234,758 91	Permits for Sheds	1,200 00	1,790 25
757,154 64	Public Franchises and Minor Privileges	22,000 00	35,713 41
50,856 71	Public Wharves and Docks	132,500 00	128,006 18
59,557 77	Quarantine Tonnage Tax	14,500 00	20,879 56
3,629 25	Rentals from City Property	15,000 00	13,833 84
*530,237 73	Sewerage Connections (City Engineer)	32,000 00	14,695 32
80,151 06	State Tax on City Loans	820 00	985 55
536,351 31	Sundry Accounts	5,000 00	5,252 97
274,001 87	Superintendent of Public Buildings (waste)	225 00	144 56
*16,948 41	Supervisors of Elections	1,500 00	3,840 00
38,718 72	Surplus, 1912	364,976 68	†816,332 53
*19,957 73	Sydenham Hospital	800 00	939 68
*11,964 40	Telephone Conduits (C. &. P. Tel. Co.)	35,000 00	41,301 27
39,259 14	Topographical Survey Commission	3,500 00	4,147 52
103,923 33	Transcripts (Health Department)	1,200 00	1,306 70
1,527,653 79	Water Dept. (water rents, old material, etc.)	1,457,000 00	1,493,003 08
121,712 58	Wharfage	38,000 00	55,169 72
462,470 21	Park Commrs. (park tax, rentals, etc.)	756,411 27	592,382 48
574,533 94	State of Maryland, Public Schools	500,000 00	515,361 91
135,940 58	School Tuitions	16,000 00	17,334 63
*82,066 91	People's Court	10,000 00	24,125 77
4,090,436 73	Department of Charities and Corrections	25,060 00	32,889 25
972,720 68	Interest on Stock Debt	646,365 00	646,365 00
*15,829 42	Motor Vehicle Licenses and Fines	19,400 00	28,986 05
63,520 80	Sale of City Stock	8,699,955 00	7,447,198 16
1,765,019 53	Sinking Funds (Park Board)	8,800 00	....
696,006 76	Sinking Funds (Water Board)	22,500 00	....
	Miscellaneous	....	775,366 86
	Temporary Loans	....	500,000 00
$24,381,195 65	Total (A-I)	$23,412,869 41	$23,378,116 70

Cash balance, January 1, 1913	$2,641,771 52
Receipts, January 1 to December 31, 1913	23,378,116 70
	$26,019,888 22
Expended, January 1 to December 31, 1913	24,381,195 65
Balance in city depositories, December 31, 1913 (A-I)	$1,638,692 57

SCHEDULE A--II.

Total Receipts of the Fiscal Year from Various Sources (Arranged to Conform with "Estimates of Receipts to Apply on Appropriations for 1913").

Abatement of nuisances (Health Department)			$1,535 24
Board of Fire Commissioners (sale of old material)			2,830 46
Board of Park Commissioners:			
Street railway park tax		$580,846 11	
Rentals, sale of old material, fines, etc		11,536 37	
			592,382 48
Board of School Commissioners:			
State of Maryland, account of public schools	$515,361 91		
State of Maryland, State High School Fund	10,000 00		
State of Maryland, free text-books	57,171 76		
		$582,533 67	
School tuitions		17,334 63	
			599,868 30
City Engineer (sale of old material)			9,663 57
City Librarian (sale of publications)			94 00
Commissioner of Street Cleaning (sale of refuse)			6,398 97
Department of Charities and Corrections:			
Reimbursement for board of insane patients		$18,209 91	
Baltimore City Jail		7,314 14	
Bay View Asylum		724 03	
Magistrates' fines		6,506 17	
			32,754 25
Deposits (temporary) to secure purchase of city stock (City Register's Department)			72,281 00
Dog licenses and fines (total)			24,003 71
Electrical Conduits (Electrical Commission)			120,800 46
Free Public Bath Commission			22,229 84
General licenses (Collector of Water Rents and Licenses)			99,017 20
"Great White Way" (collections by City Collector)			1,497 40
Infectious diseases hospital (rentals from old Quarantine property)			2,042 36
Interest on deposits			65,751 00
Interest on general loans			90,601 17
Interest on stock debt (City Register's Department):			
Water Board		$415,000 00	
Park Board		83,000 00	
Commissioners of Finance		148,365 00	
			646,365 00
Liquor licenses			996,516 31
Markets and market halls			60,183 12
Miscellaneous			190,203 24
Motor vehicles, licenses and fines (City Engineer's Department)			28,986 05
Opening streets (benefits collected by City Collector and sale of old material, etc., by Commissioners for Opening Streets)			109,830 78
People's Court			24,125 77
Permits for sheds (Inspector of Buildings)			1,790 25
Private paving and inspection (City Engineer's Department)			247,025 87
Public franchises and minor privileges			35,713 41
Public wharves and docks			128,006 18
Quarantine tonnage tax			20,879 56
Rentals from city property			13,833 84
Sale of city stock:			
General Fund 1955 Loan		$300,000 00	
Sewerage 1961 Loan		3,670,533 00	
Annex Improvement 1951 Loan		292,078 75	
Jones Falls 1961 Loan		359,678 25	
Water 1958 Loan		1,347,286 25	
Dock Improvement 1961 Loan		152,679 00	
Paving 1951 Loan		915,950 66	
School House 1961 Loan		71,968 75	
Conduit 1962 Loan		337,023 50	
			7,447,198 16
Amount carried forward			$1,695,408 95

Amount brought forward		$1,695,408 95
Sewerage connections		14,695 32
Special paving tax (collected by City Collector)		62,317 76
State tax on city loans		985 55
Superintendent of Public Buildings		144 56
Supervisors of Elections		3,840 00
Sydenham Hospital		939 68
Taxation (City Collector's Department):		
Real and personal property	$9,363,651 80	
Penalties	53,849 71	
Interest on delayed taxes	88,253 83	
		9,505,755 34
Telephone conduits (C. & P. Telephone Company)		41,301 27
Temporary loans		500,000 00
Topographical Survey Commission (blue printing department)		4,147 52
Transcripts (Health Department)		1,306 70
Water Department:		
Water rents	$1,476,409 31	
Sale of old material, etc	9,494 25	
Meter account	7,099 52	
		1,493,003 08
Weights and measures (inspections)		101 25
Wharfage		55,169 72
(A-I*a*)		$23,379,116 70
Commissioners of Finance:		
Trust funds	$50,756 74	
Sinking funds—		
Interest on deposits	4,375 52	
Rentals	32,027 36	
Interest on stock	722,466 68	
Interest on certificates of deposits	138,547 50	
Water Board, 1½% 1912 receipts	21,614 43	
Tax levy provisions	972,720 68	
Park Board	37,842 29	
Forfeit of deposit with bid for purchase of city stock	40 00	
From sale of contents of Water 1922 Loan Sinking Fund in the redemption of Water 4% 1922 Stock, prior to maturity; also cash portion of Water 1922 Loan transferred to Enoch Pratt Free Library Fund, under resolution of the Commissioners of Finance, December 4, 1913	501,284 85	
		2,481,676 05
City Register, in trust, property sold for taxes:		
Interest on investments during 1913		1,205 99
Grand total (A-I)		$25,861,998 74

SCHEDULE A—III.

Expenditures Arranged According to Departments.

Appeal Tax Court	$69,583 29
Board of Fire Commissioners	1,093,099 01
Board of School Commissioners	2,802,652 66
Board of Park Commissioners	639,193 80
Collector of Water Rents and Licenses	468,485 53
City Register, including deposits to secure purchase of city stock	2,985,415 72
City Collector	82,596 68
City Librarian	29,521 44
City Engineer	1,050,859 49
Commissioners for Opening Streets and Annex Impt. Commission	561,231 37
Opening and closing streets	379,590 75
Commissioner of Health	234,758 91
Commissioner of Street Cleaning	757,154 64
Comptroller	50,856 71
Diary City Council	59,557 77
Department of Legislative Reference	3,629 25
Electrical Commission	530,237 73
Free Public Bath Commission	80,151 06
Harbor Board	536,351 31
Inspector of Buildings	274,001 87
Amount carried forward	$2,688,928 99

Amount brought forward		$2,688,928 99
Law Department		38,718 72
Mayoralty		19,957 73
Municipal Factory Site Commission		11,964 40
Miscellaneous annual appropriations		39,259 14
Miscellaneous general expenditures		103,923 33
Paving Commission		1,527,653 79
Reformatories		121,712 58
Superintendent of Lamps and Lighting		462,470 21
Supervisors of City Charities		574,533 94
Superintendent of Public Buildings		82,066 91
Topographical Survey Commission		15,829 42
Sewerage Commission		4,090,436 73
Sinking funds		972,720 68
Visitors to the Jail		63,520 80
Water Department		1,765,019 53
Miscellaneous		56,422 32
(A-I*a*)		$22,635,139 22
State Departments:		
Courts	$281,328 26	
Liquor License Commission	16,948 41	
Police Department	1,311,839 18	
Supervisors of Elections	135,940 58	
		1,746,056 43
Commissioners of Finance:		
Trust Funds	$50,756 80	
Sinking Funds—W. M. R. R. Loan	148,365 00	
" " Purchases of stock	1,508,555 78	
Redemption of Five Million 6% 1890 Loan, in part	1,703 45	
Redemption of entire issue of Water 4% 1922 Loan held in Enoch Pratt Free Library Fund, as per resolution of Commissioners of Finance, December 4, 1913; also cash portion of Water 1922 Loan Sinking Fund remaining after above redemption	501,284 85	
		2,210,665 88
City Register, in trust, property sold for taxes:		
Purchase of city stock		92 74
Grand total (A-I)		$26,591,954 27

SCHEDULE A—IV.

General Exhibit of Receipts, Appropriations and Expenditures of the Fiscal Year 1913.

Separated under the four heads, "Ordinary," "Extraordinary," "Trust Funds" and "Temporary Accounts."

	Receipts.	Appropriations.*	Expenditures.
ORDINARY.................... (Schedule (A-VI)	$17,457,863 96	$16,065,348 77	$18,639,720 41
EXTRAORDINARY............... (Schedule (A-VI)	7,949,280 52	7,331,625 90	7,471,272 63
TRUST FUNDS................ (Schedule (A-VI)	51,962 73	4,258 00	50,849 54
TEMPORARY ACCOUNTS......... (Schedule (A-VI)	401,891 53	9,873 64	430,111 69
Totals (A-I-I*a*-II-III)...	$25,860,998 74	$23,411,106 31	$26,591,954 27

*Ordinance of Estimates, Part I.

"Ordinary" has relation only to the current receipts and "running expenses" (operation and maintenance), and does not include receipts or payments on account of loans, nor on account of permanent construction or other capital accounts.

"Extraordinary" has no relation to current receipts or "running expenses," but does include receipts and payments on account of loans, and for permanent construction and other capital accounts.

"Trust Funds" include all receipts and payments of the city when acting as trustee or as agents for funds, trusts, special deposits, etc., which cannot be used except for particular and specified purposes.

"Temporary Accounts" include all receipts and payments of the city which are simply journal items, or items paid in, temporarily held and paid out again.

It will be observed that the "Expenditures" are in excess of "Appropriations" or "Receipts," which is explained by credit balances being brought forward from previous years. The "Receipts" and "Appropriations" are actual for the year 1913 and do not include credit balances brought forward.

SCHEDULE A—V.

Exhibit of Receipts, Appropriations and Expenditures, Separated into Ordinary and Extraordinary, and Grouped According to Functions.

	Receipts.		Appropriations.	Expenditures.	
	Ordinary.	Extraordinary.		Ordinary.	Extraordinary.
1. General Government	$96,256 21	....	$657,252 64	$728,646 85	....
2. Public Safety	62,104 93	....	3,243,291 70	3,096,840 28	$75,841 43
3. Public Charities and Correction	27,335 81	$2,042 36	802,386 05	733,025 68	67,051 87
4. Public Works	601,949 06	5,238,240 66	6,996,796 54	4,471,810 07	4,408,880 50
5. Public Industries	1,956,586 54	1,836,988 75	4,726,535 00	1,386,006 72	1,956,827 09
6. Public Education, Recreation and Art	635,500 63	71,968 75	3,182,664 80	2,644,740 13	962,671 65
7. Public Debt	957,859 33	800,000 00	101,871 28	1,753,674 83	....
8. Interest	891,727 74	....	2,700,655 47	2,748,975 78	....
9. Taxation	11,157,177 45	....	10,650 00	31,150 58	....
10. Sundries	1,525,211 52	40 00	989,002 83	1,525,801 72	....
Totals (A-I-I*a*-II-III-IV)	$17,911,718 22	$7,949,280 52	$23,411,106 31	$19,120,681 64	$7,471,272 63

SCHEDULE A—VI.

I. GENERAL GOVERNMENT.

	RECEIPTS.		APPROPRIATIONS.	EXPENDITURES.	
	Ordinary.	Extraordinary.		Ordinary.	Extraordinary
11. EXECUTIVE:					
Salaries, Mayor's Office	$41 67	....	$12,000 00	$12,030 56	....
Expenses, Mayor's Office	....	....	7,927 17	7,927 17	....
	$41 67	....	$19,927 17	$19,957 73	....
12. LEGISLATIVE:					
Salaries, City Council	....	....	$47,750 00	$47,496 19	....
Expenses, City Council	....	....	12,061 58	12,061 58	....
	....	....	$59,811 58	$59,550 77	....
13. LAW:					
Salaries	....	....	$23,800 00	$23,729 01	....
Expenses	....	....	6,000 00	3,328 08	....
Judgments and Suits	$311 80	....	18,000 00	11,661 63	....
	$311 80	....	$47,800 00	$38,718 72	....

14. FINANCE:					
Salaries, Comptroller's Department			$16,900 00	$16,855 66	
Expenses, Comptroller's Department			2,975 97	2,975 97	
Salaries, City Register's Department			13,700 00	13,551 67	
Expenses, City Register's Department	$16 43		1,390 00	1,401 45	
Salaries, City Collector			74,900 00	74,611 80	
Expenses, City Collector			6,700 00	6,700 00	
Salaries, Appeal Tax Court			67,600 00	67,048 29	
Expenses, Appeal Tax Court			2,535 00	2,535 00	
Expenses, Commissioners of Finance			4,500 00	4,466 42	
City Seal (City Register)	54 35				
Auditing City Departments			8,500 00	8,000 00	
Deposits to Secure Purchases of City Stock	72,281 00			72,281 00	
	$72,351 78		$199,700 97	$270,427 26	
15. ELECTIONS:					
Salaries, Supervisors of Elections			$15,000 00	$15,000 00	
Expenses, Supervisors of Elections			3,461 00	3,461 00	
Registration, Fall			49,990 00	49,990 00	
Primary Election, Fall			33,710 00	33,710 00	
General Election, Fall			33,810 00	33,779 58	
Candidates' Assessments	$3,840 00				
	$3,840 00		$135,971 00	$135,940 58	
16. PRINTING:					
Salaries, City Librarian			$5,272 00	$5,271 16	
Expenses, City Librarian			25,550 00	24,250 28	
Advertising Laws, City Register			2,000 00	776 93	
City Librarian (Codes, etc.)	$94 00				
	$91 00		$32,822 00	$30,298 37	

17. CITY HALL AND PUBLIC BUILDINGS:					
Salaries, City Hall			$17,660 00	$17,622 50	
Salaries, City Hall Annexes			6,120 00	6,120 00	
Salaries, Court House			32,940 00	32,940 00	
Salaries, People's Court			2,880 00	2,880 00	
Expenses, City Hall			6,200 00	6,200 00	
Expenses, City Hall Annexes			7,250 00	7,250 00	
Expenses, Court House	$329 41		6,100 00	6,429 41	
Expenses, People's Court			2,625 00	2,625 00	
Superintendent of Public Buildings, Sale of Old Material	144 56				
	$473 97		$81,775 00	$82,066 91	
18. MUNICIPAL FACTORY SITE COMMISSION:					
Salaries			$3,280 00	$3,279 84	
Expenses			2,720 00	2,618 71	
Municipal Journal	$1,393 75		5,000 00	6,065 85	
	$1,393 75		$11,000 00	$11,964 40	
19. MISCELLANEOUS:					
Advertising Club of Baltimore (Contingent Fund)			$250 00	$250 00	
Jack Solomon, transcribing testimony in Elder trial (Contingent Fund)			168 00	168 00	
Charles Wilson, Storekeeper (Contingent Fund)			270 81	270 81	
Salaries, Liquor License Commission			13,625 00	13,625 00	
Expenses, Liquor License Commission	$25 00		3,300 41	*3,323 41	
Salaries, Topographical Survey			13,260 00	13,164 42	
Expenses, Topographical Survey			2,665 00	2,665 00	
Revenue, Topographical Survey	4,147 52				
Salaries, Department of Legislative Reference			3,140 00	3,140 00	
Expenses, Department of Legislative Reference			550 00	489 25	

19. MISCELLANEOUS—*Continued*:					
Expenses, Board of Estimates			5,500 00	4,892 65	
Expenses, Board of Public Improvements			600 00	501 20	
Municipal Telephone Exchange	4,187 16		15,358 00	18,844 14	
Postage Stamps	8,636 63			*8,789 94	
Public Service Commission	752 93		8,800 00	8,633 29	
Charles Schirm, attorney for H. P. Fiege, refund account Harford road (Contingent Fund)			50 00	50 00	
M. A. Rome, attorney (Contingent Fund)			300 00	300 00	
F. G. Adams (Contingent Fund)			17 88	17 88	
John L. Sanford, attorney (Contingent Fund)			7 97	7 97	
Mary M. Johnson (Contingent Fund)			8 15	8 15	
James R. Pilcher (Contingent Fund)			33 70	33 70	
Margaret Eyeler (Contingent Fund)			500 00	500 00	
Lloyd Odend'hal (Contingent Fund)			25 00	25 00	
Patrick Keelty (Contingent Fund)			15 00	15 00	
	$17,749 24		$68,444 92	79,715 11	
Total General Government	$96,256 21		$657,252 64	$728,646 85	

*Difference of $2, due to improper charge, corrected by journal entry.

2. PUBLIC SAFETY.

20. POLICE DEPARTMENT:					
Salaries			$1,200,522 47	$1,191,382 22	
Expenses			65,125 00	63,635 67	
Salaries, Police Examiners			4,800 00	4,800 00	
Expenses, Police Examiners			1,302 00	921 50	
Pensioners			48,531 03	48,531 03	
Pensioners (transferred from 1912)				2,568 76	
			$1,320,280 50	$1,311,839 18	

21. FIRE DEPARTMENT:					
Salaries			$764,335 00	$751,932 03	
Expenses	$3,852 94		194,050 00	197,902 94	
Pensions, Firemen's Widows			5,425 00	5,187 36	
Pension, Mary McGraw			400 00	400 00	
Pension, Lottie C. Curry			300 00	300 00	
Fireboat "Cataract"			65,000 00		$46,302 61
Tractors			16,000 00	9,375 00	
Chassis			30,000 00	29,194 14	
Hydrant heads			5,775 00	5,775 00	
Repair Shop			4,000 00	4,000 00	
Automobiles			6,000 00	6,000 00	
Creating of Truck Company No. 18			7,425 00	7,191 11	
Extra work, Pumping Station			15,559 32		14,538 82
Boiler, High Pressure Pipe Line			15,000 00		15,000 00
Revenue	2,830 46				
	$6,683 40		$1,129,269 32	$1,017,257 58	$75,841 43
22. COURTS:					
Salaries, Court Bailiffs, Stenographers,	$150 00		$63,300 00	$62,414 27	
Expenses, Criminal Court			95,462 50	93,865 98	
Expenses, Baltimore City Court	1 00		13,685 11	13,686 11	
Expenses, Court of Common Pleas			7,393 70	5,814 20	
Expenses, Superior Court			13,956 70	13,956 70	
Expenses, Circuit Court No. 1			3,550 00	3,514 05	
Expenses, Circuit Court No. 2			550 00	222 10	
Salaries, Orphans' Court			10,016 00	9,984 00	
Expenses, Orphans' Court			100 00	48 00	
Salaries, Supreme Bench			5,500 00	5,500 00	
Expenses, Supreme Bench			1,930 00	988 47	
Trust Department, Supreme Bench			200 00	46 30	
Salaries, Juvenile Court			11,700 00	11,691 55	
Expenses, Juvenile Court			450 00	450 00	
Salaries, People's Court			37,600 00	37,143 29	
Expenses, People's Court			805 71	805 71	
People's Court (Deficit 1912)			39,248 01		

22. COURTS—*Continued:*					
Revenue, People's Court	24,125 77				
Magistrates			21,400 00	21,197 53	
Special Medical Examinations			700 00	615 00	
Fines	6,506 17			95 50	
Removed Cases	653 60			1,159 35	
Library Company of the Baltimore Bar			2,500 00	2,500 00	
Registration Appeals (Contingent Fund)			19 50	19 50	
	$31,436 54		$330,067 23	$285,717 61	
23. HEALTH DEPARTMENT:					
Salaries,			$135,380 00	$134,602 89	
Expenses	$1 84		40,321 37	40,311 17	
Abatement of Nuisances	1,535 24		1,873 64	1,873 64	
Salaries, Quarantine	1 96		14,489 64	14,256 70	
Expenses, Quarantine	239 55		13,550 00	13,286 24	
Revenue (Sale of Birth and Death Transcripts)	1,306 70				
Quarantine Tonnage Tax	20,879 56				
Coroners			9,000 00	9,000 00	
	$23,964 85		$214,614 65	$213,330 64	
24. INSPECTOR OF BUILDINGS.					
Salaries			$60,360 00	$60,072 03	
Emptying Cess Pools			300 00	330 85	
Livery and Transportation			1,800 00	1,711 00	
Incidentals			400 00	399 19	
Contingencies			20,000 00	14,526 75	
Repairs to City Property Consolidated	$17 02		161,700 00	166,759 42	
Municipal Garage	3 12		4,500 00	4,503 12	

Supplying Heat and Light to City Hall and Court House (Transferred from 1912)				18,389 21	
Additional Room and Sanitary Improvements, City Hall				2,003 70	
	$20 14		$249,060 00	$268,695 27	
Total Public Safety	$62,104 93		$3,243,291 70	$3,096,840 28	$75,841 43
3. PUBLIC CHARITIES AND CORRECTION.					
25. HOSPITALS:					
City Patients in Hospitals			$75,379 00	$69,672 46	
Salaries, Sydenham Hospital			10,160 00	9,612 68	
Expenses, Sydenham Hospital			10,650 00	10,650 00	
Revenue, Sydenham Hospital	$939 68				
Infectious Disease Hospital		$2,042 36			
Home for Superintendent of Sydenham Hospital			6,095 35		$4,177 03
Tuberculosis Dispensary			6,000 00	5,988 56	
	$939 68	$2,042 36	$108,284 35	$95,923 70	$4,177 03
26. INSANE:					
Care of Insane			$171,500 00	$159,862 03	
Board of Insane	$18,209 91				
	$18,209 91		$171,500 00	$159,862 03	
27. DESTITUTE CHILDREN:					
Destitute and Neglected Children			$25,000 00	$20,513 37	
Board of Destitute Children	$135 00				
	$135 00		$25,000 00	$20,513 37	

28. WORKHOUSES AND ALMSHOUSES:					
Salaries, Supervisors of City Charities			$8,860 00	$8,720 00	
Expenses, Supervisors of City Charities			1,600 00	1,597 89	
Salaries, Bay View Asylum	$7 50		67,378 00	61,280 73	
Expenses, Bay View Asylum	5 55		155,589 00	155,594 55	
Board and Old Material, Bay View Asylum	724 03				
New Buildings, Bay View Asylum, Transferred from 1912					$57,805 76
Equipment and Installation of Fire Doors, Bay View Asylum			29,000 00	12,556 30	
Cow Barns and Stables, Bay View Asylum			12,500 00	9,110 91	
Bungalow for Physician, T. B., Bay View Asylum			5,124 70		5,069 08
	$737 08		$280,051 70	$248,860 38	$62,874 84
29. LODGING HOUSES:					
Temporary Care of Homeless Men			$2,000 00	$1,990 00	
30. PRISONS AND REFORMATORIES:					
City Jail, Salaries			$36,050 00	$36,020 80	
City Jail, Expenses			27,500 00	27,500 00	
City Jail, Revenue	$7,314 14				
Transportation to House of Correction			500 00	371 46	
Maryland School for Boys, Maintenance			7,800 00	7,800 00	
Maryland School for Boys, Manual Training			6,500 00	6,500 00	
Maryland School for Boys, Repairs and Improvements			5,000 00	5,000 00	
St. Mary's Industrial School			46,000 00	46,000 00	
Industrial Home for Colored Girls, Maintenance			6,000 00	6,000 00	

Industrial Home for Colored Girls, Improvements			1,500 00	1,500 00	
House of Good Shepherd			6,320 00	5,810 53	
House of Good Shepherd for Colored Girls			6,080 00	5,724 46	
Maryland Industrial School for Girls, Maintenance			7,200 00	3,971 74	
Maryland Industrial School for Girls, Repairs			2,000 00	1,973 38	
House of Ref. for Colored Boys			27,520 00	26,177 81	
National Junior Republic			3,600 00	1,534 66	
Universal School for Colored Orphans			1,200 00		
Exeter Street Rescue Home			1,080 00	1,080 00	
Florence Crittenton Mission			1,080 00	1,080 00	
The Boys' Home			1,560 00	1,560 00	
	$7,314 14		$194,490 00	$185,604 84	
31. MISCELLANEOUS:					
Dispensary Service			$10,500 00	$10,250 13	
Transportation of Poor to their Homes			1,000 00	510 73	
Maryland Workshop for the Blind			5,000 00	5,000 00	
Pension, W. H. War			260 00	260 00	
Care of Habitual Drunkards			4,300 00	4,250 50	
			$21,060 00	$20,271 36	
Total Public Charities and Correction.	$27,335 81	$2,042 36	$802,386 05	$733,025 68	$67,051 87

4. PUBLIC WORKS.

32. ADMINISTRATION:					
Salaries, City Engineer	$50 00		$43,880 00	$39,769 63	
Expenses, City Engineer (Advertising, Livery and Transportation, Incidentals)			4,800 00	4,742 93	
Salaries, Commissioners for Opening Streets			9,900 00	9,860 00	

32. ADMINISTRATION—*Continued:*					
Expenses Commissioners for Opening Streets			500 00	487 44	
Salaries, Superintendent of Lamps and Lighting			16,788 00	16,506 51	
Incidentals, Superintendent of Lamps and Lighting			350 00	350 00	
Salaries, Commissioner of Street Cleaning			26,840 00	26,549 37	
Incidentals, Commissioner of Street Cleaning			2,720 00	1,646 64	
Salaries, Harbor Board			6,130 00	5,669 84	
Incidentals, Harbor Board			500 00	395 17	
Expenses, City Surveyor,			240 00	240 00	
Salaries, Administration, Paving Commission			11,180 00	11,068 54	
Salaries, Construction, Paving Commission			52,600 00	51,915 47	
Expenses and Testing Materials, Paving Commission			11,900 00	10,802 30	
	$50 00		$188,328 00	$180,003 84	
33. OPENING, WIDENING AND GRADING STREETS:					
Opening and Closing, etc., Streets by Condemnation (Levy)	$109,830 78		$102,230 34	$379,590 75	
Opening and Closing, etc., Streets (Annex 1951 Loan)			59,663 29		
Unclaimed Damages, Opening Streets.	80 60			1 00	
Widening Harford Road, Transferred from 1912	20,121 81			4,312 42	
Annex Improvement 1951 Loan (Part III)		$292,078 75			$228 75
	$130,033 19	$292,078 75	$161,893 63	$383,904 17	$228 75

34. STREET PAVING:

Paving Mulberry, Saratoga and Pulaski Streets			$5,000 00	$2,430 71	
Improvement of Baker Street			1,090 00		
Paving Madison Street, from Luzerne Avenue to Grove Alley			2,593 97	2,557 91	
Paving Howard, Stockholm and Eutaw Streets, etc			25,000 00	23,715 27	
Paving Garrett Street, Park Avenue to Howard Street			2,600 00	2,500 00	
Paving Potomac Street (Contingent Fund)			300 00	300 00	
Paving in Annex (Annex 1951 Loan)	$10,500 35		420,516 71	362,416 85	
Salaries, Annex 1951 Loan	3 58		19,820 00	19,823 58	
Footway Crossings			1,000 00	624 12	
Paving and Repairing Cross Streets and Paving in Front of City Property	10		45,000 00	44,843 12	
Paving, Repaving and Resurfacing of Roads and Streets	4,126 25		307,050 00	319,106 27	
Grade Establishments	1,783 02		5,000 00	5,474 79	
Paving Private Alleys	3,738 37		3,000 00	5,403 00	
Laying Dust and Preserving Macadam Roads			12,000 00	11,793 39	
Private Paving and Inspection	217,025 87			259,993 69	
Paving Private Footways	3,476 18			11,586 72	
Emergency Fund	1,489 62		10,000 00	1,489 62	
Sale of Old Material (City Engineer)	9,663 57			154 00	
Improved Paving (Paving Commission)	43,270 48		924,320 00	1,453,867 48	
Paving 1951 Loan (Part III)		$915,950 66			$61 50
Special Paving Tax	62,317 76				
	$387,395 15	$915,950 66	$1,781,290 68	$2,528,110 52	$61 50

35. STREET CLEANING AND COLLECTION OF ASHES AND GARBAGE.					
Street Carts and Men			$140,400 00	$129,083 20	
Sweepers and Scrapers			212,628 00	188,672 04	
Collection of Ashes and Garbage			227,483 22	220,902 27	
Sweeping Machines and Sprinklers			63,634 00	52,860 08	
Tools and Repairs			8,085 00	6,490 40	
Removal and Disposal of Waste			25,000 00	29,927 44	
Removal of Garbage			66,500 00	66,500 00	
Emergency Fund			10,000 00		
Destruction of Weeds and Grass			2,000 00	934 00	
Sale of Refuse from Streets	$6,398 97				
Southern Product Company (Contingent Fund)			5,000 00	5,000 00	
	$6,398 97		$760,730 22	$700,369 43	
36. STREET LIGHTING:					
Gas Lighting and Maintenance			$179,742 60	$179,414 75	
Electric Lighting and Maintenance	$346 86		257,785 41	258,110 72	
Naphtha Lamps and Maintenance			9,312 00	8,088 23	
White Way Illumination	1,497 40			224 61	
Revenue	80 06				
	$1,924 32		$446,840 01	$445,838 31	
37. SEWERS AND SEWERAGE DISPOSAL:					
Cleaning Sewers and Inlets			$37,368 00	$33,589 20	
Improvements in and Additions to Drainage System	$449 06		24,000 00	19,361 73	
Repairs to Sewers	92 56		15,000 00	14,614 00	
New Sewerage System Connections	19 64				$237,012 01
Salaries, Administrative, Sewerage Commission			27,780 00		27,773 19
Salaries, Construction, Sewerage Commission	75 00		273,640 00		239,812 31

Salaries, Miscellaneous, Sewerage Commission	....	....	66,776 00	56,735 54	....
Expenses, Miscellaneous, Sewerage Commission	1,534 07	....	20,000 00	17,582 96	....
Expenses, Special, Sewerage Commission	325 47	....	35,731 00	35,641 23	....
Expenses, Construction, Sewerage Commission	27,312 56	....	2,600,000 00	....	3,712,891 50
Sewerage 1961 Loan (Part III)	....	$3,670,533 00	....	....	6 50
Sewer Connections	14,695 32	....	....	....	....
	$44,503 68	$3,670,533 00	$3,100,295 00	$177,524 66	$4,217,495 51
38. BRIDGES:					
Maintenance of Bridges and Culverts	$237 11	....	$18,000 00	$25,151 49	....
Encasing Lower Members of Calvert Street Bridge in Concrete	....	....	7,000 00	....	$7,000 00
Light Street Bridge, Maintenance and Salaries	172 25	....	16,619 00	16,756 62	....
Pratt Street Bridge Property, etc. (Transferred from 1912)	....	....	....	....	19,763 75
	$409 36	....	$41,619 00	$41,908 11	$26,763 75
39. MISCELLANEOUS:					
Maintenance of Property Yard	....	....	$2,800 00	$2,782 69	....
Insurance on City Property	$44 70	....	10,000 00	7,545 53	....
Railroad Siding and Tramway, Bay View Asylum (Transferred from 1912)	....	....	....	3,822 81	....
Jones Falls Improvement 1961 Loan (Part III)	....	$359,678 25	....	....	....
Opening and Constructing Public Highway, Jones Falls	2,203 64	....	500,000 00	....	$164,331 08
Motor Vehicles, Licenses and Fines	28,986 05	....	....	....	....
	$31,234 39	$359,678 25	$512,800 00	$14,151 03	$164,331 08
Total Public Works	$601,949 06	$5,238,240 66	$6,996,796 54	$4,471,810 07	$4,408,880 59

40. WATER WORKS:					
Salaries, Water Engineer's Department	$43 33		$106,920 00	$101,293 47	
Expenses, Water Engineer's Department	1,916 11		536,770 00	537,121 57	
Salaries, Collector of Water Rents and Licenses			30,220 00	29,836 67	
Expenses, Collector of Water Rents and Licenses			2,055 00	2,034 43	
Interest on Water Loans			415,000 00	415,000 00	
Sinking Funds 1943 Loan			22,500 00	21,614 43	
Work Done in Advance of Improved Paving			93,000 00		$147,832 01
Auxiliary Pumping Station, Lake Ashburton			10,500 00		
Cleaning Mains in Advance of Filtration			15,000 00	401 47	
Pitometer Survey for Underground Leaks	472 46		5,000 00	5,472 46	
Repairs to Pumping Station			31,700 00	3,977 89	
Salaries, Gunpowder Supply Division	32 50		75,860 00		48,918 45
Salaries Filtration Division			37,900 00		21,145 16
Extension of Water System Under the Act	2,683 88		2,497,000 00		817,309 84
New Pumps and Boiler, Mount Royal (Transferred from 1911)				81,547 21	
Water Rents and Sale of Material	1,485,903 56			3,958 43	
Meters	7,099 52			8,372 11	
Water 1958 Loan (Part III)		$1,347,286 25			18 00
	$1,498,151 36	$1,347,286 25	$3,879,425 00	$1,210,630 14	$1,035,223 46

41. CITY REAL ESTATE:					
Ground Rents on City Property			$45,000 00	$43,707 22	
Rentals from City Property	$13,833 84			211 82	
Sales of City Property	1,600 30				
	$15,434 14		$45,000 00	$43,919 04	
42. MARKETS:					
Salaries, Assistant Market Masters			$6,400 00	$6,400 00	
Expenses, Assistant Market Masters				2,493 00	
Market Cleaners and Employees			9,100 00	8,073 50	
Market Receipts	$60,011 12				
Hose for Various Markets			600 00	540 92	
Cross Street Hall	172 00			185 23	
	$60,183 12		$16,100 00	$17,692 65	
43. WHARVES AND DOCKS:					
Dredging Harbor	$867 55		$55,277 00	$56,144 54	
Ice Boats	5,048 00		23,430 00	24,096 31	
Repairs to Wharves	1,779 75		7,300 00	9,079 11	
Removal of Ashes			1,100 00	614 50	
Removal of Floating Matter			1,935 00	1,774 42	
Rents from City Docks and Piers	128,006 18			200 00	
Wharfage	55,169 72			11,156 11	
Revenue, Old Material	88 47				
Salaries, Wharves and Docks			19,068 00		$18,267 34
Commercial and Recreation Pier	11,462 19		150,000 00		256,067 48
Property and Pier South Side of Harbor (Transferred from 1912)	3,588 86				127,722 23
Dock Improvement 1961 Loan (Part III)		$152,679 00			8 75
	$206,010 72	$152,679 00	$258,110 00	$103,064 99	$402,065 80

44. SUBWAYS FOR PIPES AND WIRES:					
Salaries, Electrical Commission			$17,200 00		$16,060 49
Expenses, Electrical Commission	$14,589 20		500,000 00		503,477 34
Operating and Maintaining Completed Conduits			10,700 00	$10,699 90	
Rentals from Subways	120,800 46				
Franchise, C. & P. Telephone Co.	41,301 27				
Conduit 1962 Loan (Part III)		$337,023 50			
	$176,690 93	$337,023 50	$527,900 00	$10,699 90	$519,537 83
45. MISCELLANEOUS:					
Turnpike Dividends	$116 27				
Total Public Industries	$1,956,586 54	$1,836,988 75	$4,726,535 00	$1,386,006 72	$1,956,827 09

6. PUBLIC EDUCATION, RECREATION AND ART.

46. SCHOOLS:					
Salaries, General Office			$9,200 00	$9,200 00	
Expenses, General Office			1,500 00	1,500 00	
Salaries, Day Schools	$65 33		1,617,123 00	1,616,786 73	
Expenses, Day Schools			160,650 00	160,650 00	
Salaries, Night Schools			21,321 00	21,315 30	
Expenses, Night Schools			4,500 00	4,500 00	
Parental School			7,000 00	7,000 00	
Teachers' Retirement Fund			9,100 00	9,100 00	
Equipping New Buildings (Transferred from 1912)			21,250 00	38,665 49	
State High School Fund (Transferred from 1912)	10,000 00			12,754 33	
Improved Drinking Fountains (Transferred from 1912)				759 60	
Conducting Vacation Classes			6,000 00	6,000 00	
Free Text-Books	57,171 76			56,251 22	
Additional Ground, Lot for School No. 27			3,303 80		$11,489 47

Improved Heating and Ventilation, Schools Nos. 12, 8 and 75			5,000 00	5,000 00	
Public School Fund	515,361 91				
Tuition Fees	17,334 63			86 81	
Intestate Estates	66 24			2,222 62	
Lot for New Parental School (Transferred from Parental School)			7,000 00		11,649 30
New Addition, School No. 50			5,000 00		4,392 20
Playground and Open-Air Classroom, School No. 76			7,500 00		
Additional Yard Space, School No. 106			4,000 00		
Lot and Building, Polytechnic Institute (Transferred from 1912)			264,000 00		290,512 48
Lot and Building, School No. 22 (Transferred from 1912)			15,963 39		153,559 99
Purchase of Lot, Belvieu Avenue			10,000 00		12 50
Lot and Building, School No. 51 (Transferred from 1912)					4,058 00
Building, School No. 59 (Transferred from 1912)					3,495 90
Lot and Building, School No. 6 (Transferred from 1912)					97,559 69
Lot and Building, School No. 27 (Transferred from 1912)					101,544 75
Addition to School No. 83 (Transferred from 1912)					39,233 61
Addition to School No. 99 (Transferred from 1912)					56,344 48
Lot and Building, School No. 111 (Transferred from 1912) (Part III)					4,186 37
School House 1961 Loan (Part III)		$71,968 75			
Maryland School for the Blind			75,131 25		75,131 25
	$599,999 87	$71,968 75	$2,254,542 53	$1,951,792 10	$853,169 99

47. LIBRARIES:					
Enoch Pratt Free Library Fund			$4,258 00	$4,258 00	
Enoch Pratt Free Library, Equipment and Maintenance			36,500 00	36,500 00	
			$40,758 00	$40,758 00	
48. PARKS:					
Salaries, Office			$5,288 00	$5,266 81	
Expenses, Office			2,000 00	1,912 13	
Salaries, Parks and Squares			245,549 50	240,201 88	
Expenses, Parks and Squares			274,538 00	269,020 06	
New Improvements			73,624 50	19,079 75	
Purchase of Property for Entrance to Gwynn's Falls Park			36,000 00		$36,000 00
Balance of Park 1955 Loan (Part III)			119,411 27		63,056 27
Extension of Park System Southeast	$80 00				4,656 90
Extension of Park System Southwest	1,200 00				
Revenue, Rents, Sale of Sheep and Old Material	10,876 82				
Revenue, Fines	659 55				
	$12,816 37		$756,411 27	$535,480 63	$103,713 17
49. BATHS:					
Salaries, Free Public Bath Com			$45,436 00	$45,341 17	
Expenses, Free Public Bath Com			27,017 00	27,017 00	
Bath House and Comfort Station, Northeast Baltimore (Transferred from 1912)	$400 00				$792 89
Addition to Gwynn's Falls Pool			7,000 00	7,000 00	

Two Public Comfort Stations in Markets			10,000 00		4,995 60
Boiler, No. 1 Bath House (Transferred from 1912)				311 00	
Revenue	22,229 84				
	$22,629 84		$89,453 00	$79,669 17	$5,788 49
50. MISCELLANEOUS:					
Maryland Institute			$12,000 00	$12,000 00	
Children's Playground Association			14,000 00	14,000 00	
Veteran Volunteer Firemen's Association			1,000 00	1,000 00	
West Park Recreation Centre			1,000 00	1,000 00	
Municipal Games, Patterson Park			500 00	499 14	
Public Athletic League			3,000 00	3,000 00	
City Forester	$63 55		5,000 00	5,053 59	
Memorial to F. C. Latrobe			5,000 00		
Mural Decorations, Court House				496 50	
	$63 55		$41,500 00	$37,049 23	
Total Public Education, Recreation and Art	$635,509 63	$71,968 75	$3,182,664 80	$2,644,749 13	$962,671 65

7. PUBLIC DEBT.

51. LOANS:					
State Tax on City Loans	$985 55		$101,871 28	$96,754 05	
Temporary Loans		$500,000 00			
	$985 55	$500,000 00	$101,871 28	$96,754 05	

52. SINKING FUNDS (Commissioners of Finance).					
Interest on W. M. R. R.				$148,365 00	
Interest on Stocks and Investments	$722,466 68				
Interest on Deposits	4,375 52				
Water Board, 1913, Received 1½ per Cent. Account 1943 Loan	21,614 43				
Interest on Certificates of Deposit, W. M. R. R.	138,547 50				
Purchase and Sale of City Stock				1,508,555 78	
Park Board 5% Railway Receipts, 1913	29,042 29				
Rentals and Ground Rents	32,027 36				
Park Board 1955 Loan	8,800 00				
General Fund 1955 Loan		$300,000 00			
	$956,873 78	$300,000 00		$1,656,920 78	
Total Public Debt	$957,859 33	$800,000 00	$101,871 28	$1,753,674 83	

8. INTEREST.

53. INTEREST:					
Interest on Deposits	$65,751 00				
Interest on Horwitz Benevolent Fund Investment	742 74			$742 80	
Interest on Frederick Raine Fund	14 00			14 00	
Unpaid Interest on Stock Debt				734 25	
	$66,507 74			$1,491 05	

54. INTEREST ON TAXES:					
Interest on Taxes, City Collector	$88,253 83	...	...	...	...
	$88,253 83	...	...	...	...
55. INTEREST ON STOCK DEBT:					
Water Board Loans	$415,000 00	...	...	$415,000 00	...
Park Board Loans	83,000 00	...	...	83,000 00	...
Commissioners of Finance, W. M. R. R.	148,365 00	...	...	148,365 00	...
Interest on General Loans	90,601 17	...	$2,700,655 47	2,101,119 73	...
	$736,966 17	...	$2,700,655 47	$2,747,484 73	...
Total Interest	$891,727 74	...	$2,700,655 47	$2,748,975 78	...

9. TAXATION.

56. REAL AND PERSONAL TAXES:					
Tax Sales	$1,526 20	...	...	$1,284 88	...
Penalties	53,849 71	...	...	...	...
Real 1913	6,044,520 59	...	...	...	...
Real in Arrears	906,976 55	...	...	...	...
Personal 1913	1,455,036 28	...	...	...	...
Personal in Arrears	231,398 57	...	...	...	...
Securities	552,533 35	...	...	...	...
Savings Banks	173,186 46	...	...	...	...
Conscience Fund	161 50	...	...	...	...
	$9,419,189 21	...	...	$1,284 88	...

57. LIQUOR LICENSES:					
Receipts	$996,516 31	...	...	...	...
	$996,516 31	...	...	...	...
58. OTHER LICENSES:					
General Licenses	$99,017 20	...	$2,100 00	$5,348 78	...
Dog Licenses and Fines (Maryland S. P. C. A., etc.)	24,003 71	...	...	14,946 60	...
	$123,020 91	...	$2,100 00	$20,295 38	...
59. FRANCHISE TAXES:					
Street Railways, Park Tax, Railways, etc.	$580,846 11	...	...	...	...
Public Franchises and Minor Privileges	35,713 41	...	...	$344 00	...
	$616,559 52	...	...	$344 00	...
60. MISCELLANEOUS:					
Inspector of Weights and Measures	$101 25	...	$8,550 00	$8,465 13	...
Permits for Sheds, etc.	1,790 25	...	...	761 19	...
	$1,891 50	...	$8,550 00	$9,226 32	...
Total Taxation	$11,157,177 45	...	$10,650 00	$31,150 58	...

10. SUNDRIES.

61. FINANCE COMMISSIONERS:					
Sinking Funds, 1913	$972,720 68	....	$989,002 83	$972,720 68	....
Forfeiture of Deposit with Bid for Purchase of City Stock	....	$40 00	....	....	....
Sale of Contents of Water 1922 Loan Sinking Fund (Transferred to Enoch Pratt Free Library Fund)	501,284 85	....	....	501,284 85	....
Redemption of Five Million 6 per Cent. 1890 Loan	....	....	....	1,703 45	....
	$1,474,005 53	$40 00	$989,002 83	$1,475,708 98	....
62. PUBLIC TRUST FUNDS:					
Enoch Pratt Free Library Fund	$50,000 00	....	....	$50,000 00	....
Interest on Investment, Property Sold for Taxes, in Trust	1,205 99	....	....	92 74	....
	$51,205 99	....	....	$50,092 74	....
Total Sundries	$1,525,211 52	$40 00	$989,002 83	$1,525,801 72	....
Grand Total (A-V)	$17,911,718 22	$7,949,280 52	$23,411,106 31	$19,120,681 64	$7,471,272 63

SCHEDULE A—VII.

A Tabulated Budgetary Statement of the Finances of All Departments of the City for the Year 1913.

(Does not include Commissioners of Finance and Other Special Funds.)

A-VI and A-VIII No.	DEPARTMENTS.	CREDITS.					DEBITS.	BALANCES.			
		Balance from 1912.	Receipts.	Appropriations.	Transfers from Contingent Fund, etc.	Total Credits.	Expenditures.	Surplus or Deficiency of Credits.	Carried to 1914.	Closed to General Revenue, Loans, etc.	Closed to Appropriations.
	Appeal Tax Court.										
14	Salaries			$67,600 00		$67,600 00	$67,048 29	$551 71			$551 71
14	Expenses			$2,285 00	$250 00	2,535 00	2,535 00				
	Board of Fire Commissioners.										
21	Salaries			764,335 00		764,335 00	751,932 03	12,402 97			12,402 97
21	Expenses		$3,852 94	193,350 00	700 00	197,902 94	197,902 94				
21	Pensions—Firemen's Widows			5,425 00		5,425 00	5,187 36	237 64			237 64
21	Pension—Mary A. McGraw			400 00		400 00	400 00				
21	Pension—Lottie C. Curry			300 00		300 00	300 00				
21	Fireboat "Cataract"			65,000 00		65,000 00	46,302 61	18,697 39	$18,697 39		
21	Tractors			16.000 00		16,000 00	9,375 00	6,625 00	6,625 00		
21	Chassis			30.000 00		30.000 00	29,194 14	805 86	805 86		
21	Hydrant Heads			5,775 00		5,775 00	5,775 00				
21	Repair Shop			4,000 00		4,000 00	4,000 00				
21	Automobiles			6,000 00		6,000 00	6,000 00				
21	Creating Truck Company No. 18			7,425 00		7,425 00	7,191 11	233 89			233 89
21	Extra Work, Pumping Station, High Pressure Service			15,559 32		15,559 32	14,538 82	1,020 50	1,020 50		
21	Boiler—High Pressure Pipe Line System			15,000 00		15,000 00	15,000 00				
21	Lot and Building, Engine House No. 40	$22,242 32				22,242 32			22,242 32		
21	Lot and Building, Engine House No. 39	22,801 20				22,801 20			22,801 20		
21	Revenue—Sale of Old Material		2,830 46			2,830 46				$2,830 46	

	Board of School Commissioners.										
46	Salaries, Office			9,200 00		9,200 00	9,200 00				
46	" Day		65 33	1,617,123 00		1,617,188 33	1,616,786 73	401 60			401 60
46	" Night			21,321 00		21,321 00	21,315 30	5 70			5 70
46	Expenses, Office			1,500 00		1,500 00	1,500 00				
46	" Day			160,650 00		160,650 00	160,650 00				
46	" Night			4,500 00		4,500 00	4,500 00				
46	Parental School			7,000 00		7,000 00	7,000 00				
46	Teachers' Retirement Fund			9,100 00		9,100 00	9,100 00				
46	Equipping New Buildings	17,415 49		21,250 00		38,665 49	38,665 49				
46	State High School Fund	2,754 33	10,000 00			12,754 33	12,754 33				
46	Vacuum and Cleaning Apparatus	3,000 00				3,000 00			3,000 00		
46	Improved Drinking Fountains	804 17				804 17	759 60	44 57		44 57	
46	For Conducting Vacation Classes			6,000 00		6,000 00	6,000 00				
46	Free Text Books		57,171 76			57,171 76	56,251 22	920 54	920 54		
46	Lot and Building, School No. 51	10,615 81				10,615 81	4,058 00	6,557 81		6,557 81	
46	Lot and Building, Polytechnic Institute	58,316 73		264,000 00		322,316 73	290,512 48	31,804 25	31,804 25		
46	Building School No. 59	15,674 29				15,674 29	3,495 90	12,178 39		12,178 39	
46	Lot and Building, School No. 6	103,871 10				103,871 10	97,559 69	6,311 41	6,311 41		
46	" " " " " 22	137,596 60		15,000 00	963 39	153,559 99	153,559 99				
46	" " " " " 27	117,622 60				117,622 60	101,544 75	16,077 85	16,077 85		
46	Addition, School No. 83	99,945 42				99,945 42	39,233 61	60,711 81	60,711 81		
46	" " " 99	55,944 48			400 00	56,344 48	56,344 48				
46	Lot and Building, School No. 101	120,000 00				120,000 00	4,186 37	115,813 63	115,813 63		
46	Addition, School No. 67	66,950 00				66,950 00			66,950 00		
46	Lot and Building, School No. 61	75,000 00				75,000 00			75,000 00		
46	Addition, School No. 34	25,000 00				25,000 00			25,000 00		
46	Purchase of Lot and Erection of Building, Belvieu Ave.	38,456 03		10,000 00		48,456 03	12 50	48,443 53	48,443 53		
46	Lot, Near Sycamore and Third Aves.	6,000 00				6,000 00			6,000 00		
46	Additional Ground, Lot School No. 27	8,696 11		3,303 89		12,000 00	11,489 47	510 53			510 53
46	Lot, School No. 68	2,334 35				2,334 35			2,334 35		
46	Lot, School No. 99	5,070 13				5,070 13			5,070 13		
46	Intestate Estates	10,868 75	66 24			10,934 99	2,222 62	8,712 37	8,712 37		
46	Improved Heating and Ventilation of Schools Nos. 75, 12 and 8			5,000 00		5,000 00	5,000 00				
46	New Parental School	7,887 74		5,000 00	2,000 00	14,887 74	11,649 30	3,238 44	3,238 44		
46	New Addition, School No. 50			5,000 00		5,000 00	4,392 20	607 80	607 80		
46	Playground and Open-Air Classroom, School No. 76			7,500 00		7,500 00			7,500 00		
46	Additional Yard Space, School No. 106			4,000 00		4,000 00			4,000 00		
46	Public School Fund		515,361 91			515,361 91				515,361 91	
46	Tuition Fees		17,334 63			17,334 63	86 81	17,247 82		17,247 82	
	Board of Police Commissioners.										
20	Salaries			1,200,522 47		1,200,522 47	1,191,382 22	9,140 25	9,140 25		
20	Expenses			65,125 00		65,125 00	63,635 67	1,489 33			1,489 33
20	Pensioners	2,568 76		48,531 03		51,099 79	51,099 79				

	Board of Police Examiners.										
20	Salaries			4,800 00		4,800 00	4,800 00				
20	Expenses			1,302 00		1,302 00	921 50	380 50			380 50
	Board of Park Commissioners.										
48	Revenue—Street Railway Receipts Sale of Old Material, Rents, etc.	41,814 75	792,382 48			634,197 23			50,000 00	5,183 73	
48	Salaries, Office			5,288 00		5,288 00	5,266 81	21 19			21 19
48	Expenses, Office			2,000 00		2,000 00	1,912 13	87 87			87 87
48	Salaries, Parks and Squares			245,549 50		245,549 50	240,201 88	5,347 62			5,347 62
48	Expenses, Parks and Squares			274,538 00		274,538 00	269,020 06	5,517 94	5,517 94		
48	New Improvements			73,624 50		73,624 50	19,079 75	54,544 75	2,014 93		52,529 82
48	Purchase of Property for Addition and New Entrance to Gwynn's Falls Park			36,000 00		36,000 00	36,000 00				
48	Extension of Park System Public Park Imp. 1945-1955 Loans	119,411 26	1,280 00			120,691 26	67,713 17	52,978 09	52,978 09		
	Collector of Water Rents and Licenses										
40	Salaries			30,220 00		30,220 00	29,836 67	383 33		383 33	
40	Expenses			2,055 00		2,055 00	2,034 43	20 57		20 57	
40	Interest on Water Loans			415,000 00		415,000 00	415,000 00				
40	Sinking Fund—1943 Loan			22,500 00		22,500 00	21,614 43	885 57		885 57	
40	Water Rents, 1913		1,485,903 56			1,485,903 56	3,958 43	1,481,945 13		1,481,945 13	
40	Meters		7,099 52			7,099 52	8,372 11	1,272 59		*1,272 59	
58	General Licenses		99,017 20	2,100 00		101,117 20	5,348 78	95,768 42		95,768 42	
58	Dog Licenses and Fines		24,003 71			24,003 71	14,946 60	9,057 11		9,057 11	
	Courts, Etc.										
22	Salaries, Court Bailiffs, Stenographers, etc.		150 00	63,300 00		63,450 00	62,414 27	1,035 73			1,035 73
22	Expenses, Criminal Court	*1,009 81		95,462 50		95,462 50	94,866 79	595 71			595 71
22	" Baltimore City Court		1 00	11,071 25	2,613 86	13,686 11	13,686 11				
22	" Court of Common Pleas			7,393 70		7,393 70	5,814 20	1,579 50			1,579 50
22	" Superior Court			13,162 65	794 05	13,956 70	13,956 70				
22	" Circuit Court No. 1			3,550 00		3,550 00	3,514 05	35 95			35 95
22	" Circuit Court No. 2			550 00		550 00	222 10	327 90			327 90
22	Salaries, Orphans' Court			10,016 00		10,016 00	9,984 00	32 00			32 00
22	Expenses, Orphans' Court			100 00		100 00	48 00	52 00			52 00
22	Salaries, Supreme Bench			5,500 00		5,500 00	5,500 00				
22	Expenses, Supreme Bench			1,930 00		1,930 00	988 47	941 53			941 53
22	Trust Department, Supreme Bench			200 00		200 00	46 30	153 70			153 70
22	Salaries, Juvenile Court			11,700 00		11,700 00	11,691 55	8 45			8 45
22	Expenses, Juvenile Court			450 00		450 00	450 00				
22	Salaries, People's Court			37,600 00		37,600 00	37,143 29	456 71			456 71
22	Expenses, People's Court			500 00	305 71	805 71	805 71				

22	Deficit, 1912, People's Court	*34,487 69		39,248 01		39,248 01	34,487 69	4,760 32			4,760 32
22	Revenue, People's Court		24,125 77			24,125 77				24,125 77	
22	Magistrates			21,400 00		21,400 00	21,197 53	202 47			202 47
22	Fines		6,506 17			6,506 17	95 50	6,410 67		6,410 67	
22	Removed cases		653 60			653 60	1,159 35	505 75		*505 75	
	City Register.										
14	Salaries			13,700 00		13,700 00	13,551 67	148 33			148 33
14	Expenses		16 43	1,140 00	250 00	1,406 43	1,401 45	4 98			4 98
51	State Tax on City Loans		985 55	101,871 28		102,856 83	96,754 05	6,102 78		985 55	5,117 23
16	Advertising Loans			2,000 00		2,000 00	776 93	1,223 07			1,223 07
14	Expenses, Commissioners of Finance			2,500 00	2,000 00	4,500 00	4,466 42	33 58			33 58
41	Ground Rents of City Property			45,000 00		45,000 00	43,707 22	1,292 78			1,292 78
51	Temporary Loans		500,000 00			500,000 00			500,000 00		
55	Interest on Stock Debt		90,601 17	2,700,655 47		2,791,256 64	2,747,484 73	43,771 91			43,771 91
53	Unpaid Interest on Stock Debt	6,475 23				6,475 23	734 25	5,740 98	5,740 98		
14	Deposits to Secure Purchases of City Stock		72,281 00			72,281 00	72,281 00				
47	Enoch Pratt Free Library Fund			4,258 00		4,258 00	4,258 00				
55	Water Board, Interest on Water Loans		415,000 00			415,000 00	415,000 00				
55	Park Board, Interest on Park Loans		83,000 00			83,000 00	83,000 00				
55	Commissioners of Finance, Interest on W. M. R. R. Loan		148,365 00			148,365 00	148,365 00				
14	City Seal		54 35			54 35		54 35		54 35	
44	Turnpike Dividends		116 27			116 27		116 27		116 27	
62	In Trust, Property Sold for Taxes		1,205 99			1,205 99	92 74	1,113 25	1,113 25		
	City Collector.										
14	Salaries			74,900 00		74,900 00	74,611 80	288 20			288 20
14	Expenses			5,855 00	845 00	6,700 00	6,700 00				
56	Taxes, Real Property, 1913		6,044,520 59			6,044,520 59		6,044,520 59		6,044,520 59	
56	" " " in Arrears		906,976 55			906,976 55		906,976 55		906,976 55	
56	" Personal Property, 1913		1,455,036 28			1,455,036 28		1,455,036 28		1,455,036 28	
56	" " " in Arrears		231,398 57			231,398 57		231,398 57		231,398 57	
56	Securities (Tax on)		552,533 35			552,533 35		552,533 35		552,533 35	
56	Savings Banks Deposits (Tax on)		173,186 46			173,186 46		173,186 46		173,186 46	
56	Penalties		53,849 71			53,849 71		53,849 71		53,849 71	
34	Special Paving Tax (Credited to Paving 1951 Loan)		62,317 76			62,317 76		*62,317 76			
37	Sewer Connections		14,695 32			14,695 32		14,695 32		14,695 32	
36	Great "White Way"		1,497 40			1,497 40	224 61	1,272 79		1,272 79	
56	Conscience Fund		161 50			161 50		161 50		161 50	
56	Tax Sales	*7,689 79	1,526 20			1,526 20	1,284 88	7,448 47	7,448 47		
54	Interest on Delayed Taxes		88,253 83			88,253 83		88,253 83		88,253 83	

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*Denotes Debit Balance.

	City Librarian.										
16	Salaries			5,272 00		5,272 00	5,271 16	84			84
16	Expenses			23,900 00	1,650 00	25,550 00	24,250 28	1,299 72			1,299 72
16	Revenue, Sale of Publications, etc.		94 00			94 00		94 00		94 00	
	City Engineer.										
32	Salaries		50 00	43,880 00		43,930 00	39,769 63	4,160 37			4,160 37
32	Livery and Transportation			3,500 00		3,500 00	3,500 00				
32	Incidentals			1,000 00		1,000 00	999 53	47			47
32	Advertising			300 00		300 00	243 40	56 60			56 60
39	Maintenance Property Yard			2,800 00		2,800 00	2,782 69	17 31			17 31
34	Footway Crossings			1,000 00		1,000 00	624 12	375 88			375 88
34	Paving and Repair. Cross Streets and Paving in Front of City Property		10	45,000 00		45,000 10	44,843 12	156 98			156 98
37	Improvements in and Additions to Drainage System		449 06	24,000 00		24,449 06	24,361 73	87 33			87 33
34	Paving, Repaving and Resurfacing Roads, Streets, etc.		4,126 25	307,050 00	8,000 00	319,176 25	319,106 27	69 98			69 98
37	Repairs to Sewers		92 56	15,000 00		15,092 56	14,614 00	478 56			478 56
38	Maintenance of Bridges and Culverts		237 11	18,000 00	7,000 00	25,237 11	25,151 49	85 62			85 62
34	Grade Establishments		1,783 02	5,000 00		6,783 02	5,474 79	1,308 23			1,308 23
34	Paving Private Alleys	2,000 00	3,738 37	3,000 00		8,738,37	5,403 00	3,385 37	3,335 37		
34	Emergency Fund		1,489 62	10,000 00		11,489 62	11,489 62				
34	Laying Dust and Preserving Macadam Roads			12,000 00		12,000 00	11,793 39	206 61			206 61
50	Expenses, City Forester		63 55	5,000 00		5,063 55	5,053 59	9 96			9 96
34	Underpinning Buildings, etc., Howard, Eutaw and Hamburg Sts.	405 24				405 24			405 24		
37	New Sewerage System Connections	63,119 75	19 64			63,139 39	237,012 01	173,872 62	173,872 62		
38	Encasing Lower Members of Calvert St. Bridge in Concrete			7,000 00		7,000 00	7,000 00				
34	Paving Mulberry, Saratoga and Pulaski Sts.			5,000 00		5,000 00	2,460 71	2,539 29			2,539 29
34	Regrading, Repaving, Underpinning Walls, Howard St., etc.			25,000 00		25,000 00	23,715 27	1,284 73	1,284 73		
34	Improvement on Baker St.			1,090 00		1,090 00			1,090 00		
34	Paving Madison St. (Ord. 125, 1912)			2,593 97		2,593 97	2,557 91	36 06			36 06
34	Paving Garrett St. (Ord. 133, 1912)			2,600 00		2,600 00	2,500 00	100 00			100 00
39	Railroad Siding and Tramway, Bay View Asylum	3,822 81				3,822 81	3,822 81				
34	Private Paving and Inspection		51,768 86	*247,025 87		247,025 87	311,762 55	64,736 68			
34	Paving Private Footways			3,476 18		3,476 18	11,586 72	8,110 54		8,110 54	
34	Paving Ridgely St.	12,869 58				12,869 58				12,869 58	
34	Sale of Old Material			9,663 57		9,663 57	154 00	9,509 57		9,509 57	

	Com. for Op. Streets and Annex Imp't. Com.										
32	Salaries, Commissioners for Opening Streets			9,900 00		9,900 00	9,460 00	40 00			40 00
32	Expenses, Commissioners for Opening Streets			500 00		500 00	487 44	12 56			12 56
34	Salaries, Annex Imp. Commission		3 58	19,820 00		19,823 58	19,823 58				
34	Expenses, Annex Loan Account	124,393 69	10,500 35	420,516 71		555,410 75	362,416 85	192,993 90	192,993 90		
39	Expenses, Jones Falls Highway		2,203 64	500,000 00		502,203 64	164,331 08	337,872 56			337,872 56
33	Opening, etc., Streets by Condemnation	75,688 48	109,830 78	161,140 77	752 86	347,412 89	379,590 75	32,177 86	*32,177 86		
33	Unclaimed Damages for Opening Streets	505 17	80 60			585 77	1 00	584 77	584 77		
33	Widening Harford Ave	16,540 61	20,121 81			36,662 42	4,312 42	32,350 00		32,350 00	
	Commissioner of Health.										
23	Salaries			131,780 00	3,600 00	135,380 00	134,602 89	777 11			777 11
23	Expenses		1 84	32,950 00	7,371 37	40,323 21	40,311 17	12 04			12 04
23	Salaries, Quarantine		1 96	13,525 00	964 64	14,491 60	14,256 70	234 90			234 90
23	Expenses, Quarantine		239 55	7,350 00	6,200 00	13,789 55	13,286 24	503 31			503 31
25	Salaries, Sydenham Hospital			10,160 00		10,160 00	9,612 68	547 32			547 32
25	Expenses, Sydenham Hospital			10,650 00		10,650 00	10,650 00				
25	Tuberculosis Dispensary			6,000 00		6,000 00	5,988 56	11 44			11 44
23	Abatement of Nuisances		1,535 24	1,000 00	873 64	3,408 88	1,873 64	1,535 24		1,535 24	
23	Revenue, Sale of Birth and Death Transcripts		1,306 70			1,306 70				1,306 70	
25	Infectious Disease Hospital	5,247 64	2,042 36			7,290 00			7,290 00		
25	Board of Patients, Sydenham Hospital		939 68			939 68				939 68	
23	Quarantine Tonnage Tax		20,879 56			20,879 56				20,879 56	
25	Additional Bldg., Sydenham Hospital	29,909 10				29,909 10			29,909 10		
25	Home for Supt., Sydenham Hospital			5,000 00	1,095 38	6,095 35	4,177 03	1,918 32	1,918 32		
	Commissioner of Street Cleaning.										
32	Salaries			26,840 00		26,840 00	26,549 37	290 63			290 63
35	Street Carts and Men			140,400 00	6,771 20	147,171 20	134,083 20	13,088 00			13,088 00
35	Sweepers and Scrapers			212,628 00	2,786 41	215,414 41	188,672 04	26,742 37			26,742 37
35	Sweeping Machines and Sprinklers			63,634 00		63,634 00	60,622 83	3,011 17			3,011 17
37	Cleaning Sewers and Inlets			37,368 00		37,368 00	35,171 56	2,196 44			2,196 44
35	Tools and Repairs			8,085 00		8,085 00	6,490 40	1,594 60			1,594 60
32	Incidentals			2,720 00		2,720 00	1,646 64	1,073 36			1,073 36
35	Removal of Garbage			66,500 00		66,500 00	66,500 00				
35	Collection of Ashes and Garbage			227,483 22		227,483 22	221,114 77	6,368 45			6,368 45
35	Removal and Disposal of Waste			25,000 00	5,000 00	30,000 00	29,927 44	72 56			72 56
35	Emergency Fund			10,000 00		10,000 00					10,000 00
35	Destruction of Weeds and Grass			2,000 00		2,000 00	934 00	1,066 00			1,066 00
35	Sale of Refuse from Streets		6,398 97			6,398 97				6,398 97	

*Denotes Debit Balance.

	Comptroller.										
14	Salaries			16,900 00		16,900 00	16,855 66	44 34			44 34
14	Expenses			2,500 00	475 97	2,975 97	2,975 97				
42	Assistant Market Masters			6,400 00		6,400 00	6,400 00				
42	Market Cleaners and Employes			9,100 00		9,100 00	8,073 50	1,026 50			1,026 50
60	Salaries, Inspectors of Weights and Measures			7,200 00		7,200 00	7,200 00				
60	Expenses, Inspectors of Weights and Measures			1,350 00		1,350 00	1,263 13	84 87			84 87
39	Insurance on City Property			10,000 00	44 70	10,044 70	7,545 53	2,499 17	2,499 17		
42	Hose for Various Markets			600 00		600 00	540 92	59 08			59 08
42	Cross St. Market Hall		172 00			172 00	185 23	*13 23		13 23	
42	Markets		60,011 12			60,011 12	2,493 00	57,518 12		57,518 12	
53	Interest on Deposits		65,751 00			65,751 00				65,751 00	
19	Postage Stamp Account	*190 73	8,638 63			8,638 63	8,980 67	*342 04	342 04		
59	Public Franchises and Minor Privileges		35,713 41			35,713 41	344 00	35,369 41		35,369 41	
43	Wharfage		55,169 72			55,169 72	11,156 11	44,013 61		44,013 61	
41	Sale of City Property		1,600 30			1,600 30		1,600 30		1,600 30	
43	Piers, Wharves and Docks—Rentals		128,006 18			128,006 18	20 00	127,986 18		127,986 18	
41	Rentals from City Property		13,833 84			13,833 84	211 82	13,622 02		13,622 02	
	Diary City Council.										
12	Salaries			47,750 00		47,750 00	47,496 19	253 81			253 81
12	Expenses			11,935 00	126 58	12,061 58	12,061 58				
	Department of Legislative Reference.										
19	Salaries			3,140 00		3,140 00	3,140 00				
19	Expenses			550 00		550 00	489 25	60 75			60 75
	Electrical Commission.										
44	Salaries			17,200 00		17,200 00	16,060 49	1,139 51		1,139 51	
44	Expenses		14,589 20	500,000 00		514,589 20	503,477 34	11,111 86		11,111 86	
44	Operating and Maintaining Completed Conduits			10,700 00		10,700 00	10,699 90	10			10
44	Rental of Subway		120,800 46			120,800 46				120,800 46	
	Free Public Bath Commission.										
49	Salaries			45,436 00		45,436 00	45,341 17	94 83			94 83
49	Expenses			27,017 00		27,017 00	27,017 00				
49	Bath House and Comfort Station, Northeast Baltimore	8,703 85	400 00			9,103 85	792 89	8,310 96		8,310 96	
49	Addition to Gwynn's Falls Pool			5,000 00	2,000 00	7,000 00	7,000 00				
49	Public Comfort Station in Markets	15,000 00		10,000 00		25,000 00	4,995 60	20,004 40	20,004 40		
49	Boiler, No. 1 Bath House	1,181 88				1,181 88	311 00	870 88		870 88	
49	Revenue		22,229 84			22,229 84		22,229 84		22,229 84	

	Harbor Board.										
32	Salaries,			6,130 00		6,130 00	5,669 84	460 16			460 16
4	Dredging Harbor		867 55	55,277 00		56,144 55	56,141 54	01			01
4	ceboats		5,048 00	23,430 00		28,478 00	24,096 31	4,381 69			4,381 69
4	Repairs to Wharves		1,779 75	7,300 00		9,079 75	9,070 11	64			64
3	ight Street Bridge		172 25	16,619 00		16,791 25	16,756 62	34 63			34 63
4	Removal of Ashes			1,100 00		1,100 00	614 50	485 50			485 50
4	Removal of Floating Matter			1,935 00		1,935 00	1,774 42	160 58			160 58
3	Incidentals			500 00		500 00	395 17	104 83			104 83
4	Salaries, Public Wharves and Docks			19,068 00		19,068 00	18,267 34	800 66		800 66	
3	Widening Pratt St.- Pratt St. Bridge and Property	74,359 64				74,359 64	19,763 75	54,595 89	54,595 89		
4	Commercial and Recreation Pier	308,323 52	11,462 19	150,000 00		469,785 71	256,067 48	213,718 23	213,718 23		
4	Property—Pier South Side Harbor	633,414 97	3,588 86			637,003 83	127,722 23	509,281 60	509,281 60		
4	Rental—Public Wharves and Docks		128,006 18			128,006 18	200 00	127,806 18		127,806 18	
43	Revenue		88 47			88 47		88 47		88 47	
	Inspector of Buildings.										
24	Salaries			60,360 00		60,360 00	60,072 03	287 97			287 97
24	Emptying Cesspools			300 00	30 85	330 85	330 85				
24	Livery and Transportation			1,800 00		1,800 00	1,711 00	89 00			89 00
24	Incidentals			400 00		400 00	399 19	81			81
24	Contingencies			20,000 00		20,000 00	20,000 00				
24	Repairs to City Property Consolidated		17 02	161,700 00	5,042 40	166,759 42	166,759 42				
24	Municipal Garage		3 12	4,500 00		4,503 12	4,503 12				
24	Supplying Heat and Light from High Pressure Pumping Station to City Hall and Court House	20,951 01				20,951 01	18,389 21	2,561 80	2,561 80		
24	Additional Room and Sanitary Improvements—City Hall	3,188 48				3,188 48	2,003 70	1,184 78		1,184 78	
60	Permits for Sheds		1,790 25			1,790 25	761 19	1,029 06		1,029 06	
	Law Department.										
13	Salaries			23,800 00		23,800 00	23,729 01	70 99			70 99
13	Expenses			6,000 00		6,000 00	3,328 08	2,671 92			2,671 92
13	Judgments and Suits		311 80	18,000 00		18,311 80	11,661 63	6,650 17			6,650 17
	Liquor License Commission.										
19	Salaries			13,300 00	325 00	13,625 00	13,625 00				
19	Expenses		25 00	3,300 00	41	3,325 41	3,325 41				
1	Liquor License Receipts		996,516 31			996,516 31		996,516 31		996,516 31	
	Mayoralty.										
11	Salaries		41 67	12,000 00		12,041 67	12,030 56	11 11			11 11
11	Expenses			7,848 00	79 17	7,927 17	7,927 17				

*Denotes Debit Balance.

	Miscellaneous Annual Appropriations.										
50	Maryland Institute			12,000 00		12,000 00	12,000 00				
50	Children's Playground Association			14,000 00		14,000 00	14,000 00				
50	Veteran Volunteer Firemen's Asso.'n			1,000 00		1,000 00	1,000 00				
50	Municipal Games, Patterson Park			500 00		500 00	499 14	86			86
31	Pension, W. H. War			260 00		260 00	260 00				
50	Public Athletic League			3,000 00		3,000 00	3,000 00				
31	Maryland Workshop for the Blind			5,000 00		5,000 00	5,000 00				
22	Library Co. of the Baltimore Bar			2,500 00		2,500 00	2,500 00				
50	West Park Recreation Centre			1,000 00		1,000 00	1,000 00				
50	Memorial to F. C. Latrobe			5,000 00		5,000 00		5,000 00	5,000 00		
50	Public Athletic League, Broadway Hall	1,000 00				1,000 00		1,000 00	1,000 00		
50	Edgar Allan Poe Association	1,000 00				1,000 00		1,000 00	1,000 00		
	Miscellaneous General Expenditures.										
19	Contingent Fund			50,000 00		50,000 00	48,236 90	1,763 10			1,763 10
23	Coroners			9,000 00		9,000 00	9,000 00				
19	Board of Estimates			5,000 00	500 00	5,500 00	4,892 65	607 35			607 35
19	Board of Public Improvements			600 00		600 00	501 20	98 80			98 80
30	Transportation to House of Correction			500 00		500 00	371 46	128 54			128 54
58	General Licenses			2,100 00		2,100 00	5,348 78	*3,248 78			*3,248 78
47	Enoch Pratt Free Library			36,500 00		36,500 00	36,500 00				
31	Care of Habitual Drunkards			3,000 00	1,300 00	4,300 00	4,250 50	49 50			49 50
22	Special Medical Examinations			700 00		700 00	615 00	85 00			85 00
19	Public Service Commission		752 93	8,800 00		8,800 00	8,633 29	166 71			166 71
19	Municipal Telephone Exchange		4,187 16	15,358 00		19,545 16	18,844 44	700 72			700 72
14	Auditing City's Accounts			8,500 00		8,500 00	8,000 00	500 00			500 00
	Municipal Factory Site Commission.										
18	Salaries			3,280 00		3,280 00	3,279 84	16			16
18	Expenses, Municipal Fac. Site Com.			2,720 00		2,720 00	2,618 71	101 29			101 29
18	Expenses, Municipal Journal		1,393 75	5,000 00		6,393 75	6,065 85	327 90			327 90
	Paving Commission										
32	Salaries, Administrative			11,180 00		11,180 00	11,068 54	111 46		111 46	
32	Salaries, Construction			52,600 00		52,600 00	51,915 47	684 53		684 53	
32	Testing Materials			10,000 00		10,000 00	9,970 54	29 46		29 46	
32	Expenses			1,900 00		1,900 00	831 76	1,068 24		1,068 24	
34	Improved Paving	830,138 63	43,270 48	924,320 00		1,797,724 08	1,453,867 48	343,856 60	343,856 60		
34	Special Paving Fund (Collected by City Collector and Credited to Improved Paving)		62,317 76			62,317 76		62,317 76	62,317 76		

	Reformatories.										
30	Maryland School for Boys, Maintenance			7,800 00		7,800 00	7,800 00				
30	Maryland School for Boys, Manual Training			6,500 00		6,500 00	6,500 00				
30	Maryland School for Boys, Repairs and Improvements			5,000 00		5,000 00	5,000 00				
30	St. Mary's Industrial School			46,000 00		46,000 00	46,000 00				
30	Industrial Home for Colored Girls, Maintenance			6,000 00		6,000 00	6,000 00				
30	Industrial Home for Colored Girls, New Improvements			1,500 00		1,500 00	1,500 00				
30	House of Good Shepherd, Maintenance			6,320 00		6,320 00	5,810 53	509 47			509 47
30	House of Good Shepherd for Colored Girls, Maintenance			6,080 00		6,080 00	5,724 46	355 54			355 54
30	Maryland Industrial School for Girls, Maintenance			7,200 00		7,200 00	3,971 74	3,228 26			3,228 26
30	Maryland Industrial School for Girls, Repairs			2,000 00		2,000 00	1,973 38	26 62			26 62
30	House of Reformation for Colored Boys, Maintenance			27,520 00		27,520 00	26,177 81	1,342 19			1,342 19
30	National Junior Republic	500 00		3,600 00		4,100 00	1,534 66	2,565 34	500 00		2,065 34
30	Universal Progressive School for Colored Children, Maintenance			1,200 00		1,200 00		1,200 00			1,200 00
30	Exeter St. Rescue Home for Women			1,080 00		1,080 00	1,080 00				
30	Florence Crittenton Mission			1,080 00		1,080 00	1,080 00				
30	The Boys' Home			1,560 00		1,560 00	1,560 00				
	Sewerage Commission.										
[illegible]	Salaries, Administrative			27,780 00		27,780 00	27,773 19	6 81		6 81	
37	" Construction		75 00	273,640 00		273,715 00	239,812 31	33,902 69		33,902 69	
27	" Pumping Station			17,500 00		17,500 00	16,643 51	856 49		856 49	
37	" Disposal Plant			23,876 00		23,876 00	22,014 02	1,861 98		1,861 98	
37	" Gen. City Cement Lab.			7,400 00		7,400 00	6,042 86	1,357 14		1,357 14	
37	" Repair. and Clean. Sewers			18,000 00		18,000 00	12,035 15	5,964 85		5,964 85	
37	Expenses, Pumping Station			11,500 00		11,500 00	10,625 00	875 00		875 00	
37	" Disposal Plant			6,000 00		6,000 00	5,993 16	6 84		6 84	
37	" Gen. City Cement Lab.		1,534 07	500 00		2,034 07	705 46	1,328 61		1,328 61	
37	" Repair. and Clean. Sewers			2,000 00		2,000 00	259 34	1,740 66		1,740 66	
37	Special Expenses		325 47	35,731 00		36,056 47	35,641 23	415 24		415 24	
37	Expenses, Construction	2,876,740 92	27,312 56	2,600,000 00		5,504,053 48	3,712,891 50	1,791,161 98	1,791,161 98		

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*Denotes Debit Balance.

	Sinking Funds.								
61	General Sinking Fund		60,979 15		60,979 15	62,459 78	*1,480 63		1,480 63
61	Funding 1936 Loan		34,845 23		34,845 23	35,691 31	*846 08		846 08
61	Refunding 1940 Loan		69,690 46		69,690 46	71,382 61	*1,692 15		1,692 15
61	Four Million 1945 Loan		17,422 61		17,422 61	17,845 66	*423 05		423 05
61	Water 1916 Loan		69,690 46		69,690 46	71,382 61	*1,692 15		1,692 15
61	Water 1922 Loan		17,422 62		17,422 62	17,845 66	*423 04		423 04
61	Water 1926 Loan		34,845 23		34,845 23	35,691 31	*846 08		846 08
61	Conduit 1922 Loan		34,845 23		34,845 23	35,691 31	*846 08		846 08
61	Conduit 1928 Loan		34,845 23		34,845 23	35,691 3	*846 08		846 08
61	Public Improvement 1940 Loan		69,690 46		69,690 46	71,382 60	*1,692 14		1,692 14
61	Internal Improvement 1928 Loan		104,535 69		104,535 69	107,073 91	*2,538 22		2,538 22
61	Burnt District 1954 Loan		69,690 46		69,690 46	71,382 61	*1,692 15		1,692 15
61	Water 1958 Loan		38,000 00						
61	Water 1943 Loan		22,500 00						
61	Conduit 1958 Loan		7,600 00						
61	Burnt District Improvement 1960 Loan		7,600 00						
61	Dock Improvement 1961 Loan		15,200 00						
61	Annex 1954 Loan		17,500 00						
61	Annex Improvement 1951 Loan		29,500 00						
61	New Sewerage 1980 Loan		37,000 00		370,500 00	369,614 43	885 57		
61	New Sewerage Improvement 1961 Loan		76,000 00						
61	New Engine House 1957 Loan		8,800 00						
61	New School House 1955 Loan		8,800 00						
61	School House 1961 Loan		11,400 00						
61	Public Park Improvement 1955 Loan		8,800 00						
61	Jones Falls Improvement 1961 Loan		7,600 00						
61	Paving 1951 Loan		59,000 00						
61	Conduit 1962 Loan		15,200 00						
	Superintendent of Lamps and Lighting.								
32	Salaries		16,788 00		16,788 00	16,506 51	281 49		281 49
36	Gas Lighting and Maintenance		179,742 60		179,742 60	179,414 75	327 85		327 85
36	Electric Lights and Maintenance	346 86	257,340 81	444 60	258,132 27	258,110 72	21 55		21 55
36	Naphtha Lamps and Maintenance		9,312 00		9,312 00	8,088 23	1,223 77		1,223 77
32	Incidentals		350 00		350 00	350 00			
36	Revenue	80 06			80 06		80 06	80 06	
36	"White Way" Illumination	1,497 40			1,497 40	224 61	1,272 79	1,272 79	

Superintendent of Public Buildings.

17	Salaries, City Hall			17,660 00		17,660 00	17,622 50	37 50			37 50
17	" City Hall Annex			6,120 00		6,120 00	6,120 00				
17	" Court House			32,940 00		32,940 00	32,940 00				
17	" People's Court			2,880 00		2,880 00	2,880 00				
17	Expenses, City Hall			6,200 00		6,200 00	6,200 00				
17	" City Hall Annex			7,250 00		7,250 00	7,250 00				
17	" Court House		329 41	6,100 00		6,429 41	6,429 41				
17	" People's Court			2,625 00		2,625 00	2,625 00				
17	Revenue		144 56			144 56		144 56		144 56	

Supervisors of City Charities.

28	Salaries, Office			8,860 00		8,860 00	8,720 00	140 00			140 00
28	Expenses, Office			1,600 00		1,600 00	1,597 89	2 11			2 11
26	Care of Insane			171,500 00		171,500 00	159,862 03	11,637 97			11,637 97
25	City Patients in Hospitals			75,379 00		75,379 00	69,672 46	5,706 54			5,706 54*
27	Destitute and Neglected Children			25,000 00		25,000 00	20,513 37	4,486 63			4,486 63
31	Dispensary Service			10,500 00		10,500 00	10,250 13	249 87			249 87
29	Temporary Care of Homeless Men			2,000 00		2,000 00	1,990 00	10 00			10 00
31	Transp't'n of Poor to their Homes			1,000 00		1,000 00	510 73	489 27			489 27
28	Salaries, Bay View Asylum		7 50	67,118 00	260 00	67,385 50	61,280 73	6,104 77			6,104 77
28	Expenses, Bay View Asylum		5 55	155,589 00		155,594 55	155,594 55				
28	New Building, Bay View Asylum	57,805 76				57,805 76	57,805 76				
28	New Improvements, Bay View Asylum	3,259 06				3,259 06		3,259 06	3,259 06		
28	Equipment and Installation of Fire Doors, Bay View Asylum			29,000 00		29,000 00	12,556 30	16,443 70	16,443 70		
28	Cow Barns and Stables, Bay View Asylum			12,500 00		12,500 00	9,110 91	3,389 09	3,389 09		
28	Bungalow for Physicians, Tuberculosis Hospital, Bay View Asylum			3,500 00	1,624 70	5,124 70	5,069 08	55 62	55 62		
28	Revenue, Bay View Asylum		724 03			724 03		724 03		724 03	
27	Board of Destitute Children		135 00			135 00		135 00		135 00	
26	Board of Insane Patients		18,209 91			18,209 91		18,209 91		18,209 91	

Supervisors of Elections.

15	Salaries			15,000 00		15,000 00	15,000 00				
15	Expenses			3,461 00		3,461 00	3,461 00				
15	Registration, Fall			49,990 00		49,990 00	49,990 00				
15	Primary Election, Fall			33,710 00		33,710 00	33,710 00				
15	General Election, Fall			33,810 00		33,810 00	33,779 58	30 42			30 42
15	Revenue, Candidates' Assessments		3,840 00			3,840 00		3,840 00		3,840 00	

*Denotes Debit Balance.

	Topographical Survey Commission.										
19	Salaries			13,260 00		13,260 00	13,164 42	95 58			95 58
19	Expenses			2,015 00	650 00	2,665 00	2,665 00				
19	Revenue, Blue Prints, etc.		4,147 52			4,147 52		4,147 52		4,147 52	
	Visitors to Baltimore City Jail.										
30	Salaries			36,050 00		36,050 00	36,020 80	29 20			29 20
30	Expenses			27,500 00		27,500 00	27,500 00				
30	Revenue		7,314 14			7,314 14		7,314 14		7,314 14	
	Water Department.										
40	Salaries		43 33	106,920 00		106,963 33	101,293 47	5,669 86			5,669 86
40	Work Done in Advance of Improved Paving			93,000 00		93,000 00	147,832 01	*54,832 01	*54,832 01		
40	Pitometer Survey for Underground Leaks		472 46	5,000 00		5,472 46	5,472 46				
40	Auxiliary Pumping Station, Lake Ashburton			10,500 00		10,500 00		10,500 00	10,500 00		
40	Cleaning Mains in Advance of Filtration			15,000 00		15,000 00	401 47	14,598 53	14,598 53		
40	Repairs to Pumping Station			31,700 00		31,700 00	3,977 89	27,722 11	27,722 11		
40	Expenses		1,916 11	536,770 00		538,686 11	537,121 57	1,564 54			1,564 54
40	Water Rents, 1913		1,485,903 56			1,485,903 56	3,958 43	1,481,945 13		1,481,945 13	
40	Meters		7,099 52			7,099 52	8,372 11	*1,272 59		*1,272 59	
58	General Licenses		101,117 20			101,117 20	5,348 78	95,768 42		95,768 42	
58	Dog Licenses and Fines		24,003 71			24,003 71	14,946 60	9,057 11		9,057 11	
40	Salaries, Gunpowder Supply and Improvement Div. Water 1958 Loan		32 50	75,860 00		75,892 50	48,918 45	26,974 05		26,974 05	
40	Salaries, Filt. Div., Water 1958 Loan			37,900 00		37,900 00	21,145 16	16,754 84		16,754 84	
40	Extension of the Water System Under the Act, Water 1958 Loan		2,683 88	2,497,000 00		2,499,683 88	817,309 84	1,682,374 04		1,682,374 04	
40	Const'n Reservoir, Ashburton, Water 1958 Loan	5,048 43				5,048 43		5,048 43	5,048 43		
40	New Pumps and Boiler, Mt. Royal Pumping Station, Water 1958 Loan	112,059 97				112,059 97	81,547 21	30,512 76	30,512 76		

	Loans (Cash Balances).										
	Conduit 1962 Loan (Part III)		337,023 50			337,023 50	504,948 63	167,925 13	*167,925 13		
	General Fund 1955 Loan (Part III)		300,000 00			300,000 00		300,000 00		300,000 00	
	Dock Impt. 1961 Loan (Part III)	*11,672 41	152,670 25			152,670 25	387,006 00	246,008 16	*246,008 16		
	Water 1955 Loan (Part III)	*439,857 00	1,347,268 25			1,347,268 25	966,204 28	58,793 03	*58,793 03		
	New Sewerage Impt. 1961 Loan (Part III)	303,082 08	3,670,526 50			3,670,526 50	4,061,189 63	87,581 05	*87,581 05		
	Dock 1960 Loan (Part III)	64,146 95				64,146 95	19,763 75	44,383 20	44,383 20		
	Annex Impt. 1951 Loan (Part III)	181,068 43	291,850 00			472,918 43	371,736 50	101,181 93	101,181 93		
	School House 1961 Loan (Part III)	273,538 83	71,966 75			345,507 58	530,298 26	*184,790 68	*184,790 68		
	School House 1957 Loan (Part III)	24,846 12				24,846 12	18,846 12	6,000 00	6,000 00		
	Fire Engine House 1957 Loan(Part III)	45,043 52				45,043 52		45,043 52	45,043 52		
	Conduit 1958 Loan (Part III)	13,056,53				13,056 53		13,056 53	13,056 53		
	Jones Falls Impt. 1961 Loan (Part III)	162,578 24	359,678 25			522,256 49	162,127 44	360,129 05	360,129 05		
	Paving 1951 Loan (Part III)	843,689 49	915,889 16			1,759,578 65	1,422,065 55	337,513 10	337,513 10		
	Commissioners of Finance (Part III)	16,231 57									
	Park Extension 1955 Loan (Part III)	119,411 26				119,411 26	66,433 17	52,978 09	52,978 09		
	Miscel'aneous.										
46	Maryland School for the Blind			75,116 66	14 59	75,131 25	75,131 25				
50	Mural Decorations, Court House	500 00				500 00	496 50	3 50		3 50	
32	City Surveyor				240 00	240 00	240 00				
39	Motor Vehicles, Licenses and Fines		28,986 05			28,986 05		28,986 05		28,986 05	
19	Public Service Commission		752 93			752 93		752 93		752 93	
60	Inspectors of Weights and Measures		101 25			101 25		101 25		101 25	
44	Telephone Conduits, Rental Tax		41,301 27			41,301 27		41,301 27		41,301 27	
41	Rentals from City Property		13,833 84			13,833 84	211 82	13,622 02		13,622 02	
41	Sale of City Property		1,600 30			1,600 30		1,600 30		1,600 30	

*Denotes Debit Balance.

SCHEDULE A—VIII.

1. GENERAL GOVERNMENT

EXECUTIVE A—VI (11).

MAYORALTY (11).

Salaries, appropriation	$12,000 00	
Salary returned	41 67	
		$12,041 67

EXPENDITURES.

Mayor, James H. Preston	$6,000 00	
Secretary, Robert E. Lee	2,300 00	
Clerk, Charles Kreuder, Jr.	1,500 00	
Messenger, Walter E. Busch	1,200 00	
Stenographer, Edw. M. Grindell	749 98	
" Reginald Keene	280 58	
		12,030 56
Balance to Surplus 1913		$11 11

Expenses, appropriation	$7,848 00	
Transferred from Contingent Fund	79 17	
		$7,927 17

EXPENDITURES.

Stationery, newspapers, directory, telegrams, filling in commissions	$254 44	
Advertising paving tax statement in city papers	280 62	
Copy of oil portrait of Mayor Smith	25 00	
Contribution to Fraternal Order of Eagles' Convention Fund	250 00	
" " Ad. Club Convention Fund	1,000 00	
" " Railway Claim Agents' Convention Fund	100 00	
Printing Mayor's Message	50 03	
Printing speeches of department heads before Women's Civic League	161 50	
Special stenography and typewriting	238 10	
Postage	152 50	
Typewriter	54 58	
H. S. Cummings, settlement, injury to horse by fire engine	50 00	
League of American Municipalities, one year's dues	60 00	
Railroad fare and expenses of delegates to League of American Municipalities Convention	303 01	
Railroad fare and expenses to get Ad. Club Convention	30 00	
National Star-Spangled Banner Committee, for clerk hire, traveling expenses, advertising (expended by committee direct)	2,000 00	
Railroad fare, expenses, lunches, advertising, in perfecting plans for Star-Spangled Banner Celebration	456 65	
Printing Borough Bill	150 00	
Railroad fare and expenses, tour of counties in interest of Borough Bill and other city bills (not including Mayor's personal expenses)	58 00	
Advertising Borough and Home Rule Bills in county papers	912 33	
Railroad fare and expenses to New York, relative to Pennsylvania Railroad's Baltimore terminals, including fee for professional services, Wm. Barclay Parsons, consulting engineer ($296.56)	447 94	
Ed. C. Heald, consulting engineer, professional services, examination and advice as to Recreation Pier	90 60	
Entertaining out-of-town visitors (not including Mayor's personal expenses)	30 60	
Expenses of inspection trip of Chesapeake and Delaware Canal (not including Mayor's personal expenses)	569 10	
Motion-picture films, views of Baltimore	77 17	
Andrew Hunter, Jr., & Co., expert accountants, examining books of Valley R. R. of Virginia and report thereon	125 00	
		7,927 17

LEGISLATIVE A—VI (12).

DIARY CITY COUNCIL (12).

Salaries, appropriation			$47,750 00

EXPENDITURES.

First Branch Employes:			
Chief Clerk, Gilbert A. Dailey	$1,599 84		
Reading Clerk, Andrew J. Preller	1,200 00		
Committee Clerk, Edward H. Hargrave	1,200 00		
Page, George W. Graham	799 92		
Sergeant-at-Arms, Harry J. McClellan	799 92		
Doorkeeper, John A. Forster	699 84		
" John T. Mullin	699 84		
		$6,999 36	
First Branch Members:			
1st Ward, George L. Durm	$1,000 00		
2d " James J. Jung	1,000 00		
3d " William J. Garland	1,000 00		
4th " John D. Spencer	1,000 00		
5th " Samuel Lasch	1,000 00		
6th " Henry Rapp	1,000 00		
7th " John F. Gettemuller	1,000 00		
8th " William W. Stockham	1,000 00		
9th " Charles R. Whiteford	1,000 00		
10th " John A. J. McKenna	1,000 00		
11th " Jefferson D. Norris	1,000 00		
12th " Timothy O. Heatwole	1,000 00		
13th " Samuel L. West	1,000 00		
14th " Augustus C. Binswanger	1,000 00		
15th " Harry C. Kilmer	1,000 00		
16th " Albert C. Tolson	1,000 00		
17th " Harry S. Cummings	1,000 00		
18th " Edward Gross	1,000 00		
19th " John F. O'Meara	1,000 00		
20th " William N. Hildebrand	1,000 00		
21st " John E. Benson	1,000 00		
22d " Charles A. Jording	1,000 00		
23d " William Hiller	1,000 00		
24th " William J. Lang	1,000 00		
		24,000 00	
Second Branch Employes:			
Chief Clerk, C. Charles Friedel	$1,599 84		
Reading Clerk, Norval H. King	1,200 00		
Committee Clerk, William Fink	1,200 00		
Sergeant-at-Arms, Frank Zeigenheim	799 92		
Page, John G. Scott	699 84		
		5,499 60	
Second Branch Members:			
President, John Hubert	$3,000 00		
1st District, George Heller	1,000 00		
1st " John H. Trautfelter	1,000 00		
2d " Edwin R. Downes	1,000 00		
2d " Isaac Frank, Dec. 15, '12-Apr. 7, '13.	352 78		
2d " G. J. Shaw, Apr. 9, '13-Dec. 15, '13	644 45		
3d " Duke Bond	1,000 00		
3d " Francis P. Curtis	1,000 00		
4th " Charles H. Heintzeman	1,000 00		
4th " Richard N. Sheckells	1,000 00		
		10,997 23	
			47,496 19
Balance to Surplus 1913			$253 81

Expenses, appropriation	$11,935 00	
Transferred from Contingent Fund	126 58	
		$12,061 58

EXPENDITURES.

Meyer & Thalheimer, City Printer, printing City Council Journals and departmental reports	$11,300 69	
C. N. Waller, engrossing resolutions upon death of Dr. James Bosley	60 00	
Floral designs and carriage hire, funeral of late Congressman George Konig	55 00	
Amounts carried forward	$11,415 69	$12,061 58

Amounts brought forward	$11,415 69	$12,061 58
J. F. Pruess, indexing City Council Journals	250 00	
Advertising	32 59	
Ice and cleaning towels	35 35	
Postage	227 95	
A. B. Montague, running elevator	100 00	
		12,061 58

LAW A—VI (13).

CITY SOLICITOR (13).

Salaries, appropriation		$23,800 00

EXPENDITURES.

City Solicitor, S. S. Field	$4,500 00	
Deputy City Solicitor, Alexander Preston	3,000 00	
Assistant City Solicitor, Benjamin H. McKindless	2,500 00	
“ “ “ Frank Driscoll	2,500 00	
“ “ “ Robert F. Leach, Jr.	2,500 00	
Clerk, Henry W. Weeks	1,800 00	
Assistant Clerk, George Vavrina	1,200 00	
Messenger, John K. Wess	350 00	
General Assistant, Edward J. Colgan, Jr.	1,787 50	
Stenographer, Alma L. Marchant	650 00	
“ Florence M. Cook	600 00	
“ Katharine H. Doyle	600 00	
“ Margaret I. Pierce	600 00	
“ Virginia F. McGuire	600 00	
“ Julia A. McNeal	386 67	
“ Mary A. Cadden	154 84	
		23,729 01
Balance to Surplus 1913		$70 99

Expenses, appropriations		$6,000 00

EXPENDITURES.

Terrence D. Overcash, examining titles	$775 40	
Jere J. Santry, examining titles	642 40	
Charles H. Buck, examining titles	240 30	
B. Harris Henderson, examining titles	718 70	
Title Guarantee and Trust Co., examining titles	105 00	
Meyer & Thalheimer, filing cases	416 00	
Law books	101 40	
Book binding	80 95	
Traveling expenses and carfare	56 00	
Postage stamps	35 00	
Miscellaneous—Supplies, repairs, newspapers, printing, stationery	156 93	
		3,328 08
Balance to Surplus 1913		$2,671 92

Judgments and Suits, appropriation	$18,000 00	
Receipts	311 80	
		$18,311 80

EXPENDITURES.

Costs of cases in following Courts:			
Baltimore City Court	$1,023 87		
Court of Common Pleas of Baltimore City	59 95		
Superior Court of Baltimore City	109 35		
Circuit Court of Baltimore City	59 20		
“ “ No. 2 of Baltimore City	103 90		
“ “ for Baltimore County	56 40		
Court of Appeals of Maryland	87 50		
		$1,500 17	
Settlements of following cases vs. city:			
Superior Court of Baltimore City—			
Wm. H. Gross	$122 50		
Mary Hitchcock	100 00		
Thomas Horst	154 50		
Dora Smith	100 00		
Caroline Spuck	300 00		
Leonard C. Steinacker	200 00		
		977 00	
Amounts carried forward		$2,477 17	$18,311 80

Amounts brought forward		$2,477 17	$18,311 80
Baltimore City Court—			
Cora L. Dunster	$200 00		
Louise Harding	25 00		
Mary G. Kellum	30 00		
		255 00	
Following judgments against city:			
Thomas Hitchcock, Baltimore City Court	$39 20		
Charles W. Nickle, Court of Common Pleas	755 38		
Mary E. Whaley, People's Court	30 00		
		824 58	
Settlement of following claims against city:			
Peter Ablomiates	$25 00		
Armour Packing Co	28 12		
Max Dragon et al	25 00		
W. Hall Harris, Postmaster	2 60		
George Hoffman	40 00		
George H. Martin	40 00		
Frank A. Mason	30 00		
Bridget C. Neary	253 00		
H. Elizabeth Reamy and husband	10 00		
Flora Rich	35 00		
Stella Rowe	35 00		
August A. Schleigh	25 00		
Louis Schneider	25 00		
Nellie F. Sheridan	45 00		
Robert M. Stein	80 00		
Wm. J. Stein et al	127 11		
Henry J. Zimmerman et al	122 50		
		948 33	
Miscellaneous:			
Stenographers' fees	$1,321 70		
Printing briefs	858 75		
Transcripts, Court of Appeals and local courts	2,099 00		
Professional services and expenses	935 05		
Magistrates' cases and tax cases, acknowledgements	1,942 05		
		7,156 55	
			11,661 63
Balance to Surplus 1913			$6,650 17

FINANCE A—VI (14).

COMPTROLLER (14).

Salaries, appropriation		$16,900 00

EXPENDITURES.

Comptroller, James F. Thrift	$4,000 01	
Deputy Comptroller, W. T. Childs	2,991 66	
Chief Clerk and General Bookkeeper, Joseph S. Clarke	1,800 00	
Auditor and Market Master, Samuel K. Thomas	1,500 00	
Asst. Clerk and Chief Inspector of Weights and Measures, George A. Donoghue	1,400 00	
Auditor and Harbor Master, M. Frank Fitzpatrick	1,400 00	
License and Market Detective, Wm. L. Glascock	1,200 00	
Clerk, C. Roland Stallings	999 99	
" Richard K. Thursby	999 99	
Stenographer and Clerk, Victorine K. Robertson*	564 01	
		16,855 66
Balance to Surplus 1913		$44 34

*Part salary paid by Board of Estimates.

Expenses, appropriation	$2,500 00	
Transferred from Contingent Fund	475 97	
		$2,975 97

EXPENDITURES.

Meyer & Thalheimer, printing annual report	$224 20	
" " stationery and printing	107 62	
New property ledger, research	814 50	
New card system for indexing deeds	186 25	
Burroughs Adding Machine Co., new adding machine (part charged to Board of Estimates)	250 55	
Amounts carried forward	$1,583 12	$2,975 97

Amounts brought forward	$1,583 12	$2,975 97
Postage stamps	109 27	
Meals, night work (overtime)	191 45	
Dorothy M. Murphy, extra stenographer	330 00	
T. M. Blondell, extra stenographer supply	234 25	
Services of extra clerk, typewriting checks	87 80	
Dues, National Association of Comptrollers	40 00	
Premiums on employes' bonds	60 50	
Geo. A. Donoghue, Chief Inspector of Weights and Measures, traveling expenses to convention, Washington, D. C.	33 65	
Dulany-Vernay Co., new property ledger	60 20	
Miscellaneous — Printing, stationery, newspapers, rubber stencils, numbering machine, recording deeds	245 73	
		2,975 97

CITY REGISTER (14).

Salaries, appropriations		$13,700 00

EXPENDITURES.

City Register, Richard Gwinn	$3,500 00	
Deputy Register, Isaac L. Newman	2,500 00	
Chief Clerk, Wm. T. Gatchell	1,700 00	
Stock Clerk, Theodore A. Masterman	1,600 00	
Assistant Clerk, Charles H. Moore	1,200 00	
" " Walter R. Lyon	1,200 00	
" " Edward J. Byrnes	1,000 00	
Stenographer, Louis McShane	541 67	
" T. Worth Murphy	300 00	
" (additional help)	10 00	
		13,551 67
Balance to Surplus 1913		$148 33

Expenses, appropriation	$1,140 00	
Receipts	16 43	
Transferred from Contingent Fund	250 00	
		$1,406 43

EXPENDITURES.

Premium on employes' bonds	$192 00	
Postage	530 00	
Meals, overtime work	25 75	
Printing and stationery	182 95	
Stenographers' services	411 99	
Miscellaneous	58 76	
		1,401 45
Balance to Surplus 1913		$4 98

CITY COLLECTOR (14).

Salaries, appropriation		$74,900 00

EXPENDITURES.

City Collector, Jacob W. Hook	$2,000 00	
Deputy Collector, E. A. Hartman	2,500 00	
Cashier, C. T. Jenkins	1,800 00	
Assistant Cashier, J. L. Cassard	313 00	
" " H. S. Dixon	1,130 55	
Bookkeeper, B. F. Gallery	1,600 00	
Cash Bookkeeper, David Cowan	1,600 00	
Assistant Bookkeeper, W. F. Stricker	1,245 67	
Chief Clerk, Wm. Linthicum	1,500 00	
Piece Clerk, A. T. Benzinger	595 98	
" " S. M. Wood	704 02	
Ledger Clerk, J. G. Roeder, Jr	1,300 00	
" " J. L. Ranft	1,300 00	
" " S. L. Streett	1,300 00	
" " E. A. Holmes	1,300 00	
" " W. S. O'Donnell	1,300 00	
" " J. D. Taylor	1,300 00	
" " T. F. Hannon	1,300 00	
" " N. J. Pfeifer	1,300 00	
" " J. A. Kelly	1,300 00	
Amounts carried forward	$26,689 22	$74,900 00

Amounts brought forward	$26,689 22	$74,900 00
Ledger Clerk, J. M. Mulligan	1,300 00	
" " W. A. Price	1,300 00	
" " F. Kohler	1,300 00	
" " W. T. Clark	1,300 00	
" " F. D. Fenneman	1,300 00	
" " M. P. Caughey	1,300 00	
" " W. F. Stricker	54 33	
" " T. W. Brown, Jr	1,245 67	
" " H. C. Anderson	1,245 67	
" " P. L. Leydecker	1,245 67	
Bailiff, J. W. Scott	1,300 00	
" W. L. Buck	1,300 00	
" J. T. Brady	1,300 00	
" L. H. Theiss	1,300 00	
" T. H. Durkin	1,252 24	
" T. L. Drummey	1,300 00	
" G. I. Eagleston	1,300 00	
" J. J. Fitzsimmons	1,300 00	
" W. J. McDonnell	1,300 00	
" L. Griesman	1,300 00	
" C. J. Gehring	1,300 00	
" J. P. Huber	1,300 00	
" G. C. Hubert	1,300 00	
" J. H. Hall	1,300 00	
" H. B. Humphreys	1,300 00	
" J. J. Mahon, Jr	1,300 00	
" P. J. Lynch	1,300 00	
" C. Murray	1,300 00	
" W. H. McGinnity	1,300 00	
" C. B. Miner	1,300 00	
" J. M. Nolan	1,300 00	
" J. M. Pope	1,300 00	
" J. J. Snyder	1,300 00	
" H. Stein	1,300 00	
" G. S. Stocksdale	1,300 00	
" P. J. Tewey	1,300 00	
" J. G. Barrett	1,300 00	
" E. T. Cole	1,029 30	
" C. A. Ogle	249 70	
		74,611 80
Balance to Surplus 1913		$288 20

Expenses, appropriation	$5,855 00	
Transferred from Contingent Fund	845 00	
		$6,700 00

EXPENDITURES.

Suppers for employes while on night duty	$2,224 50	
Premiums on employes' bonds	1,425 50	
Postage stamps	984 89	
Advertising	305 27	
Services of stenographer	720 00	
Tax computer	330 00	
City directories	49 00	
Extra help	264 71	
Printing annual report	9 75	
Metal omnibuses	245 00	
Incidentals—Newspapers, rubber stamps, notary fees, map and drawing instruments	141 38	
		6,700 00

APPEAL TAX COURT (14).

Salaries, appropriation	$67,600 00

EXPENDITURES.

Judge, Oscar Leser	$3,000 00	
" Albert B. Cunningham	3,000 00	
" John Gill, Jr	3,000 00	
Chief Clerk, Frank J. Murphy	2,200 00	
Assistant Chief Clerk, Clarence W. Biddle	1,600 00	
Court Clerk, Charles M. Childs	1,595 84	
Chief Assessor, J. C. LeGrand Cole	2,400 00	
Assistant to Chief Assessor, David Stiefel	1,800 00	
Amounts carried forward	$18,595 84	$67,600 00

Amounts brought forward	$18,595 84	$67,600 00
Assistant to Chief Assessor, George W. Edwards	1,800 00	
Special Assessor, Thomas J. Lindsay	2,200 00	
" " Alfred D. Bernard	2,200 00	
Assessor, Daniel C. Coblens	2,000 00	
" Samuel B. Fauth	2,000 00	
" James W. Flack, Jr	2,000 00	
" M. Luther Wright	2,000 00	
" Wm. A. Harvey, Jr	1,970 83	
" George R. Cross	1,500 00	
" Henry A. Williams	1,500 00	
" W. Charles Pistel	1,500 00	
" J. Wesley White	1,500 00	
" James Q. Farmer	1,412 50	
" (and clerk), Peter R. Quinn	1,500 00	
" Charles E. Parr	1,484 16	
" Webster I. Bians	1,295 83	
" John F. Ahern	1,295 83	
" Wm. T. McMahon	1,295 83	
" Oregon Milton Dennis	1,295 83	
" F. W. Max Weissenborn	1,295 83	
" Oliver S. Rhodes	1,224 17	
" John J. O'Meara	1,202 50	
" (and clerk), Young O. Wilson	1,484 16	
Clerk, Thomas E. Jenkins	991 66	
" Augustus B. Clark	1,400 00	
" Nesbit Turnbull	1,295 83	
" J. Harry Jenkins	1,325 00	
" John J. Volz	1,295 83	
" F. Bernard Aiken	1,295 84	
" Henry Fenge	1,224 17	
" Frank F. O'Connor	1,191 65	
" Jeremiah J. Santry	408 33	
" Joseph J. Philbin	595 84	
" Edward J. McCall	91 66	
" Wm. F. Wallace	379 17	
		67,048 29
Balance to Surplus 1913		$551 71

Expenses, appropriation	$2,285 00	
Transferred from Contingent Fund	250 00	
		$2,535 00

EXPENDITURES.

Plats, drawing sketches, etc	$668 44	
Transportation	634 67	
Postage	224 11	
Suppers of employes, account overtime work	194 60	
Register of Wills	150 00	
Auto registrations	103 94	
Two steel cabinets	139 28	
List of vessel property	125 00	
New typewriter and repairs, and ribbon books	95 70	
Miscellaneous — Chronicles, papers, law books, assessors' blanks, stencils, directories	199 26	
		2,535 00

COMMISSIONERS OF FINANCE (14).

Expenses, appropriation	$2,500 00	
Transferred from Contingent Fund	2,000 00	
		$4,500 00

EXPENDITURES.

Stock certificates	$482 50	
Advertising proposal for city stock	2,801 83	
Postage	60 00	
Safe deposit box	60 00	
Express, telegrams, etc.	20 05	
Printing and rubber stamps	133 90	
Property books	600 00	
Meals, account overtime work	87 40	
Traveling expenses to New York and Boston	120 74	
James A. Hutchinson, legal opinion	100 00	
		4,466 42
Balance to Surplus 1913		$33 58

CITY SEAL (14).

Receipts for certified copies of documents	$54 35
Paid into city treasury	54 35

AUDITING CITY DEPARTMENTS (14).

Appropriation	$8,500 00
Paid contractor (Baltimore Audit Co.)	8,000 00
Balance to Surplus, 1913	$500 00

DEPOSITS TO SECURE PURCHASE OF CITY STOCK (14).

Deposited by various persons	$72,281 00
Applied on purchase of city stock	72,281 00

ELECTIONS A—VI (15).

BOARD OF SUPERVISORS OF ELECTIONS (15).

Salaries, appropriation		$15,000 00

EXPENDITURES.

Supervisor, James McEvoy, Jr., President	$2,500 00	
" Edmund J. Wachter	2,500 00	
" Ruxton M. Ridgely	2,500 00	
Counsel, Lewis Putzel	1,200 00	
Chief Clerk, Levi A. Thompson	2,000 00	
Deputy Chief Clerk, James E. Hubbert	1,700 00	
Messenger, Moses Kuff	800 00	
Temporary Clerk, Howard R. Buckley	1,400 00	
" " George N. Brian	141 67	
" " George A. Roesninck	100 00	
" " James McC. Gibson	83 33	
Carpenter, George L. K. Taylor	75 00	
		15,000 00

Expenses, appropriation		$3,461 00

EXPENDITURES.

Stationery	$1,162 48	
Printing	994 96	
Storage of booths	503 00	
Cleaning ballot boxes	310 11	
Advertising	161 40	
Rent of telephones	133 51	
Miscellaneous—Booth curtains, supplies, expert testimony, insurance, carriage hire	195 54	
		3,461 00

REGISTRATION—FALL (15).

Appropriation		$49,990 00

EXPENDITURES.

Pay of judges and room rent	$46,363 00	
Printing and posting registered names	2,041 04	
Advertising	436 84	
Preparing supplies	358 32	
Stationery	349 55	
Printing	200 00	
Maps	147 00	
Costs of mandamus cases	94 25	
		49,990 00

PRIMARY ELECTION FALL (15).

Appropriation		$33,710 00

EXPENDITURES.

Pay of judges, clerks and room rent	$23,490 00	
Advertising	4,327 54	
Repairs to booths	1,700 00	
Stationery	996 14	
Ballots	994 00	
Printing	915 00	
Amounts carried forward	$32,422 68	$33,710 00

Amounts brought forward	$32,422 68	$33,710 00
Lumber	460 22	
Hauling	402 70	
Erecting and taking down booths and portable houses	309 40	
Booth curtains and brass flanges	115 00	
		33,710 00

GENERAL ELECTION—FALL (15).

Appropriation		$33,810 00

EXPENDITURES.

Pay of judges, clerks and room rent	$23,500 00	
Advertising	4,466 25	
Ballots	3,200 00	
Repairs to booths	794 01	
Hauling	422 40	
Lumber	381 55	
Erecting and taking down booths and portable houses	361 45	
Printing	246 00	
Additional counsel	150 00	
Storage of booths	141 00	
Hardware and flanges	116 92	
		33,779 58
Balance to Surplus 1913		$30 42

REVENUE (15).

Assessments of Candidates, Primary Election—Fall, 1913.

Dr. George Heller	$75 00
John Pleasants	100 00
Stephen C. Little	100 00
John J. Linney	100 00
Edward H. Hargrave	100 00
Lloyd Wilkinson	25 00
William J. Ogden	25 00
Vincent L. Palmisano	25 00
James A. Dawkins	25 00
Wirt Adam Duvall	25 00
George Howard Hillary	25 00
James McC. Trippe	25 00
Antony Dimarco	25 00
James M. Ambler	100 00
George M. Fink	25 00
Charles P. Coady	75 00
William Curran	25 00
George D. Iverson, Jr	25 00
Charles G. Gordon	25 00
Edward V. Coonan	100 00
John W. Lohmuller	25 00
George Ebberts	25 00
William E. Joyce	25 00
Frank J. Callahan	25 00
Blair Lee	100 00
Benjamin F. Woelper, Jr	75 00
Allen W. Beam	25 00
John C. Linthicum	25 00
John Eberenz	25 00
James Knox Insley	25 00
John Richard Sullens	25 00
Harry K. Brooks	25 00
Philip W. Eckles	25 00
William O. Atwood	100 00
Joseph L. Wickes	100 00
John G. Grasser	25 00
J. Frank Fox	25 00
Frederick H. Adams	25 00
Charles W. Main	25 00
John H. Bouse	25 00
Lloyd Odend'hal	25 00
Thomas F. McNulty	100 00
John P. Brandau	25 00
Frank F. Busch	25 00
Harry H. Mahool	25 00
Chauncey T. Scudder	25 00
Amount carried forward	$2,050 00

Amount brought forward	$2,050 00
Frederick J. Singley	25 00
Charles Reviol	25 00
Walter M. League	25 00
George Washington Williams	25 00
Charles G. Griebel	25 00
John Salmon	25 00
Albert F. Eastwood	25 00
Stephen J. McDonough	25 00
Herbert Phillips	25 00
Charles Newman Joyce	25 00
John H. Ferguson	75 00
John R. Fisher	25 00
E. Milton Altfeld	25 00
Charles W. Jones	25 00
Jacob Myer	25 00
Henry W. Williams	25 00
John Stonewall J. Healy	25 00
James A. McQuade	25 00
Harry G. Shakespeare	25 00
Walter E. Knickman	25 00
Rufus W. Applegarth	25 00
Samuel H. Easton	25 00
George Arnold Frick	25 00
Arthur E. Adams	100 00
George F. Cooper	25 00
J. Leo Burlage	25 00
Charles Newman	25 00
Henry G. Loewer	25 00
Irving M. Selby	25 00
Joseph M. McCormick	25 00
William G. Albrecht	100 00
Charles A. Jording	100 00
John R. Gardner	100 00
Thomas L. Ruckle	25 00
Joseph E. Delaney	25 00
William M. Burns	25 00
Michael A. Manion	25 00
W. Preston Rasin	25 00
William Purnell Hall	25 00
Gustav Krause	25 00
A. Manning Zimmers	25 00
John L. Sebald	25 00
William Moore	25 00
Albert M. Sproesser	25 00
William W. Bishop	25 00
Felix T. Riley	25 00
Frank M. Oliver	25 00
Frank E. Poffel	25 00
Thomas Parran	40 00
Blair Lee	40 00
Oliver Metzerott	40 00
Emerson C. Harrington	40 00
Augustus M. Denhard	40 00
Caleb C. Magruder	40 00
Paid into city treasury	$3,840 00

PRINTING A—VI (16).

CITY LIBRARIAN (16).

Salaries, appropriation		$5,272 00

EXPENDITURES.

City Librarian, Wilbur F. Coyle	$2,000 00	
First Assistant City Librarian, G. Elmer Kirwan	1,000 00	
Second Assistant City Librarian, Harry L. Johnson	850 00	
Clerk, William H. Soine	850 00	
Utility Messenger, B. Preston Smith	364 00	
Delivery Boy, Andrew Doyle	17 32	
" " Vincent L. Clisham	91 73	
" " Louis Schrieber	98 11	
		5,271 16
Balance to Surplus 1913		$0 84

Expenses, appropriation	$23,900 00	
Transferred from Contingent Fund	1,650 00	
		$25,550 00

EXPENDITURES.

Stationery, printing, blank books and supplies supplied various departments:

Appeal Tax Court	$1,590 63	
Baltimore City Jail	469 42	
City Collector	2,186 97	
Comptroller	727 07	
City Engineer	1,591 65	
City Register	902 09	
City Solicitor	313 64	
Commissioners for Opening Streets	154 28	
Commissioner of Street Cleaning	378 37	
Board of Fire Commissioners	1,461 16	
Free Public Bath Commission	270 42	
Harbor Board	142 59	
Commissioner of Health	4,837 40	
Inspector of Buildings	843 24	
Juvenile Court	136 53	
Mayoralty	188 09	
Board of School Commissioners	2,746 22	
Factory Site Commission	65	
Superintendent of Lamps and Lighting	334 25	
Superintendent of Public Buildings	50 02	
Supervisors of City Charities	929 39	
Topographical Survey	241 77	
Department of Legislative Reference	57 49	
City Library	2,456 09	
People's Court	1,240 85	
		24,250 28
Balance to Surplus 1913		$1,299 72

ADVERTISING LAWS (16).

Appropriation		$2,000 00

EXPENDITURES.

E. Raine	$129 75	
Daily Record	127 47	
Charles C. Fulton & Co.	323 33	
Baltimore News	54 90	
Baltimore Star	141 48	
		776 93
Balance to Surplus 1913		$1,223 07

CITY LIBRARIAN—REVENUE (16).

Sale of city publications	$94 00
Paid into city treasury	94 00

CITY HALL AND PUBLIC BUILDINGS A—VI (17).

SUPERINTENDENT OF PUBLIC BUILDINGS (17).

Salaries, City Hall, appropriation		$17,660 00

EXPENDITURES.

Superintendent, George T. Ames	$2,000 00	
Clerk to Superintendent, Hugh Doyle	1,200 00	
Watchman, James J. Callahan	720 00	
" Thomas J. Riggin	720 00	
" R. S. Jones	720 00	
" Wm. N. Conner	720 00	
Fireman, John F. Cain	900 00	
" Hans Koch	637 50	
" Leroy Buxbaum	37 50	
" J. W. Fitzpatrick	12 50	
" Charles Krutsch	175 00	
" William Murphy	900 00	
Laborer, James H. Long	221 49	
" John E. Reibert	298 51	
" Louis F. Simpson	520 00	
Amounts carried forward	$9,782 50	$17,660 00

Amounts brought forward	$9,782 50	$17,660 00
Window Polisher, John K. Kelly	259 92	
" " James W. Hentz	260 08	
Elevator Conductor, Alva B. Montague	720 00	
Superintendent of Charwomen, Lillian Fitzgerald	480 00	
Charwoman, Eliza Cunningham	360 00	
" Louise Marks	360 00	
" Ann C. Cromwell	360 00	
" Ellen Donegan	360 00	
" Florence Drury	360 00	
" Frances Furst	360 00	
" Ellen Haney	315 00	
" Eleanor Solomon	45 00	
" Mary Keys	360 00	
" Annie Heath	360 00	
" Latila Bennett	360 00	
" Sarah A. Mettee	360 00	
" Barbara Wagner	360 00	
" Catharine Slaughter	360 00	
" Julia Martin	360 00	
" Mary E. Arnold	360 00	
" Annie S. Wilson	360 00	
" Kate Herman	360 00	
		17,622 50
Balance to Surplus 1913		$37 50

Salaries, City Hall Annexes, appropriation		$6,120 00

EXPENDITURES.

Janitor and Fireman, Charles A. Bokman	$720 00	
" " " James Fisher	720 00	
Watchman, George Kimmerle	720 00	
" Henry J. Edel	720 00	
" James F. Busey	720 00	
" Adolph Statter	720 00	
Charwoman, Clementine Anderson	360 00	
" Dollie Reid	360 00	
" Sarah McGuirk	360 00	
" Dora Keller	360 00	
" M. A. Miskimons	360 00	
		6,120 00

Salaries, Court House, appropriation		$32,940 00

EXPENDITURES.

Assistant Superintendent, Terrence McMahon	$1,200 00	
Chief Engineer, John H. Fridinger	1,200 00	
Assistant Engineer, Lee E. Norfolk	37 50	
" " Patrick Gough	862 50	
" " William Collins	900 00	
Chief Electrician, C. D. Boyle	1,200 00	
Assistant Electrician, Charles J. Kelly	900 00	
" " Thomas Murphy	900 00	
Watchman, Frank Wysong	720 00	
" James Shearon	720 00	
" Patrick Nixon	720 00	
" Patrick Lee	720 00	
" Joseph M. Coakley	720 00	
" Samuel Shield	720 00	
Elevator Man, Walter McGreevy	720 00	
" " W. J. Shriver	306 77	
" " James H. Long	413 23	
" " Augustus Watts	720 00	
" " George Meyer	720 00	
" " Robert Dowell	720 00	
Janitor, Patrick A. Vaughan	720 00	
Marble Polisher, Herman A. Barth	720 00	
Assistant Marble Polisher, Thomas Dowd	580 00	
Furniture Polisher, John B. Green	720 00	
Window Polisher, F. S. Torback	520 00	
" " James F. Brown	520 00	
Laborer, Philip Desch	520 00	
" Bernard Foit	520 00	
" William H. Hickey	520 00	
Amounts carried forward	$20,460 00	$32,940 00

Amounts brought forward	$20,460 00	$32,940 00
Utility Man, Stephen Arata	600 00	
" " J. W. Fitzpatrick	600 00	
Court Matron, Agnes Wilson	360 00	
Superintendent of Charwomen, Mary Freeman	480 00	
Charwoman, Annie Dowd	360 00	
" Gertrude Meyler	360 00	
" Fannie Florenyeck	360 00	
" Maggie Carmine	360 00	
" Margaret Thistlewaite	360 00	
" Margaret Quinn	360 00	
" Kate Hagerty	360 00	
" Mary Norr	360 00	
" Annie Lemback	360 00	
" Mary Lundy	360 00	
" Ellen Leonard	360 00	
" Mollie Moffett	360 00	
" M. T. McLaughlin	360 00	
" Julia A. Proffin	360 00	
" Mary E. Burdatt	360 00	
" Kate Rausch	360 00	
" Cecelia Geyer	360 00	
" Mary E. Dunn	360 00	
" Ida Smith	360 00	
" Theresa Schone	360 00	
" Margaret Vorlaufer	360 00	
" Maggie Sumwalt	360 00	
" Kate Thompson	360 00	
" Tina Thomas	360 00	
" Annie Parr	360 00	
" Maggie McKenna	360 00	
" Catharine Weber	360 00	
" Lena Fitzpatrick	360 00	
" Alice Miller	360 00	
		32,940 00

Salaries, People's Court, appropriation		$2,880 00

EXPENDITURES.

Watchman, Michael Noon	$720 00	
" Martin P. Reynolds	720 00	
" Louis J. Cuneo	720 00	
Charwoman, Margaret McKew	360 00	
" Delia Cole	360 00	
		2,880 00

Expenses, City Hall, appropriation		$6,200 00

EXPENDITURES.

New furniture	$1,310 00	
Lighting, gas and electrical supplies	418 53	
General supplies	1,291 02	
General repairs	254 60	
Towel service	212 15	
Furniture repairs	740 65	
Ice	395 63	
Curtains	130 57	
Carpets and other floor coverings	643 43	
Carpet cleaning	248 25	
Miscellaneous and labor	554 97	
		6,200 00

Expenses, City Hall Annexes, appropriation		$7,250 00

EXPENDITURES.

Lighting, gas and electrical appliances	$969 15	
General supplies	738 84	
General repairs	115 90	
Carpets and other floor coverings	181 95	
Coal and wood	1,177 36	
Ice	251 16	
Rent	3,300 00	
Miscellaneous and labor	193 95	
New furniture	321 69	
		7,250 00

Expenses, Court House, appropriation	$6,100 00	
Received from Fire Department for coal	240 91	
" " departments for removing old records	88 50	
		$6,429 41

EXPENDITURES.

Miscellaneous and labor	$3,978 82	
Ice	373 29	
Towel service	128 41	
Electric lamps	434 00	
General repairs	203 96	
Furniture repairs	120 00	
New furniture and carpets	1,190 93	
		6,429 41

Expenses, People's Court, appropriation		$2,625 00

EXPENDITURES.

Coal and wood	$572 98	
Filing cases	458 00	
Safe	130 00	
General supplies	773 20	
Miscellaneous and labor	173 94	
Curtains	59 75	
Lighting	341 94	
Ice	17 71	
General repairs	97 48	
		2,625 00

REVENUE (17).

Received from sale of old paper and junk	$144 56
Paid into city treasury	144 56

MUNICIPAL FACTORY SITE COMMISSION A—VI (18).

Salaries, appropriation		$3,280 00

EXPENDITURES.

Secretary, A. S. Goldsborough	$2,499 84	
Chief Clerk, Oscar J. Hook	780 00	
		3,279 84
Balance to Surplus 1913		$0 16

Expenses, appropriation		$2,720 00

EXPENDITURES.

Thomas & Evans Co., printing	$593 24	
Multigraph Co., circulars	957 22	
Addressograph Co., circulars	292 11	
Postage	170 00	
Underwood Typewriter Co., typewriter	55 53	
Miscellaneous—Clippings, engravings, rubber stencils, photographs, stationery, printing, maps	550 61	
		2,618 71
Balance to Surplus 1913		$101 29

MUNICIPAL JOURNAL (18).

Appropriation	$5,000 00	
Receipts from subscriptions	1,393 75	
		$6,393 75

EXPENDITURES.

Clerk, Thomas M. Canavan	$747 50	
Thomas & Evans, printing *Journal*	2,885 43	
Postage	2,095 08	
Extra help (mailing *Journal*)	101 50	
Miscellaneous, cuts, advertisement	236 34	
		6,065 85
Balance to Surplus 1913		$327 90

MISCELLANEOUS A—VI (19).

CONTINGENT FUND (19).

Appropriation		$50,000 00

EXPENDITURES.

*City Surveyor	$240 00	
*Health Department -Salaries	3,600 00	
* " " Expenses	7,371 37	
*Quarantine—Salaries	964 64	
* " Expenses	6,200 00	
*Abatement of nuisances	873 64	
*Topographical Survey Commission—Expenses	650 00	
Advertising Club of Baltimore	250 00	
*Saratoga street widening, refunds	752 86	
*Gwynn's Falls Pool	2,000 00	
H. P. Feige, refund, account Harford road	50 00	
J. Salomon, transcribing testimony, Elder trial	168 00	
*Lot for new Parental School	2,000 00	
M. A. Rome, attorney, release of damages	300 00	
T. G. Adams, refund of taxes	17 88	
Catherine Hays, refund of taxes	7 97	
Mary M. Johnson, refund of taxes	8 15	
Charles Wilson, salary as storekeeper	270 81	
*Board of Estimates	500 00	
*Bay View—Salaries	260 00	
*City Librarian—Expenses	1,650 00	
*Commissioners of Finance—Expenses	2,000 00	
*Fire Department -Expenses	700 00	
*People's Court—Expenses	305 71	
*Home for Superintendent of Sydenham Hospital	1,095 35	
*Appeal Tax Court—Expenses	250 00	
*City Collector—Expenses	845 00	
*Supt. Lamps and Lighting, elec. lighting and maintenance.	444 60	
*Bungalow for physicians, Bay View Asylum	1,624 70	
*Care of habitual drunkards	1,300 00	
*Comptroller—Expenses	475 97	
*Completing School No. 22	963 39	
Registration appeals	19 50	
James R. Pilcher, refund of taxes	33 70	
*City Register—Expenses	250 00	
*Board of Liquor License Commissioners—Salaries	325 00	
* " " " " " Expenses	41	
*Baltimore City Court	2,613 86	
*Diary City Council—Expenses	126 58	
*Mayoralty Expenses	79 17	
*Superior Court—Expenses	794 05	
*Maryland School for Blind	14 59	
Margaret Eyeler, release of damages for death of husband.	500 00	
Lloyd Odend'hal, refund of candidate fee	25 00	
Patrick Keelty, refund of cost of bond	15 00	
Southern Products Co	5,000 00	
City Engineer, paving Potomac street	300 00	
		48,236 90
Balance to Surplus 1913		$1,763 10

*Transferred to accounts stated.

BOARD OF LIQUOR LICENSE COMMISSIONERS (19).

Salaries. appropriation	$13,300 00	
Transferred from Contingent Fund	325 00	
		$13,625 00

EXPENDITURES.

Commissioner, J. Henry Baker	$2,500 00	
" Addison E. Mullikin	2,500 00	
" Joseph A. Buck	2,500 00	
Counsel, George W. Cameron	1,041 74	
Chief Clerk, John F. Langhammer	1,800 00	
Clerk, J. Brower Gardner	1,200 00	
" Wm. C. Rath	1,100 00	
" Charles F. Weis	275 69	
" George Wise	49 03	
Stenographer, Wm. W. Chester	658 54	
		13,625 00

Expenses, appropriation	$3,300 00	
Returned salary	25 00	
Transferred from Contingent Fund	41	
		$3,325 41

EXPENDITURES.

Advertising	$1,954 49	
Stationery, books and blanks	273 69	
Telephone service	175 21	
Salaries	755 82	
Miscellaneous Laundry, postage, rubber stencils	166 20	
		3,325 41

TOPOGRAPHICAL SURVEY COMMISSION (19).

Salaries, appropriation	$13,260 00

EXPENDITURES.

Chief Engineer, Joseph W. Shirley	$2,439 52	
Assistant Engineer, R. N. Hanna	1,493 75	
" " M. Blundon	1,493 75	
Draughtsman, L. B. Mather	1,200 00	
" Wm. R. G. Irwin	813 47	
" Robb Gover	140 32	
" Wm. B. Johnston	913 71	
" Thomas Fletcher	75 00	
Clerk, Charles Poske	873 23	
Transitman, E. J. Hecker	900 00	
" A. E. Warner	747 50	
Rodman, R. Alexander	50 00	
" C. B. Kinsey	550 00	
" R. Norman Hanna	600 00	
" Wm. Foley	25 00	
Blue Printer, George B. Cooley	600 00	
Messenger, Robert Hopkins	249 17	
		13,164 42
Balance to Surplus 1913		$95 58

Expenses, appropriation	$2,015 00	
Transferred from Contingent Fund	650 00	
		$2,665 00

EXPENDITURES.

Print linen	$1,249 59	
Blue print paper coating machine	450 00	
New 500-foot map	230 00	
Car fares	113 00	
Installing boundary stones	104 84	
Postage	22 94	
Miscellaneous Supplies, traveling expenses	494 63	
		2,665 00

REVENUE (19).

Sale of topographical survey sheets and blue printing	$4,147 52
Paid into city treasury	4,147 52

DEPARTMENT OF LEGISLATIVE REFERENCE (19).

Salaries, appropriation	$3,140 00

EXPENDITURES.

Executive, Horace E. Flack	$2,000 00	
Cataloguer, Ella S. Hitchcock	600 00	
Stenographer, Nellie W. Mewshaw	540 00	
		3,140 00

Expenses, appropriation	$550 00

EXPENDITURES.

Postage	$150 00	
Card and document cabinets	87 75	
Expenses of Executive attending National Municipal League meeting, Toronto, Canada	55 91	
Books, magazines, newspapers, dues	94 56	
Miscellaneous—Printing, expressage, supplies	101 03	
		489 25
Balance to Surplus 1913		$60 75

BOARD OF ESTIMATES (19).

Appropriation	$5,000 00	
Transferred from Contingent Fund	500 00	
		$5,500 00

EXPENDITURES.

Meyer & Thalheimer, printing 1913 appropriation books	$260 25	
Dulany-Vernay Co., binders and printing estimate sheets	61 00	
C. C. Fulton & Co., advertising Ord. of Estimates for 1914	251 10	
E. Raine, advertising Ordinance of Estimates for 1914	216 85	
Burroughs Adding Machine Co., adding machine (part paid by Comptroller)	249 25	
Underwood Typewriter Co., typewriters	218 39	
Consulting Enginer, Calvin W. Hendrick	2,500 00	
" " R. Keith Compton	511 11	
Stenographer, Victorine K. Robertson	421 80	
Postage	164 76	
Misc.—Stationery, rubber stamps, letter files, filing boxes	38 14	
		4,892 65
Balance to Surplus 1913		$607 35

BOARD OF PUBLIC IMPROVEMENTS (19).

Appropriation	$600 00

EXPENDITURES.

Secretary and clerical assistance	501 20
Balance to Surplus 1913	$98 80

MUNICIPAL TELEPHONE EXCHANGE (19).

Appropriation	$15,358 00	
Received from Collector of Water Rents and Licenses	161 30	
" " Chesapeake and Potomac Tel. Co., refund	1,251 13	
" " Electrical Commission	391 52	
" " estate of Dr. James Bosley	24 17	
" " Harbor Board	7 93	
" " Park Board	558 91	
" " Paving Commission	63 71	
" " Register of Wills	97 02	
" " Sewerage Commission	18 29	
" " Supervisors of Elections	77 56	
" " Water Department	1,352 92	
" " tolls	182 70	
		$19,545 16

EXPENDITURES.

Chesapeake and Potomac Telephone Co.	18,844 44
Balance to Surplus 1913	$700 72

POSTAGE STAMP ACCOUNT (19).

Balance from 1912	$190 73	
Amount purchased	8,787 94	
		$8,978 67

DISTRIBUTION.

Appeal Tax Court	$224 11	
Bay View Asylum	61 31	
Board of Estimates	161 00	
Board of Fire Commissioners	61 49	
Board of School Commissioners	703 58	
City Collector	984 89	
City Engineer	355 00	
City Librarian	35 00	
City Register	610 00	
Collector of Water Rents and Licenses	253 50	
Commissioners of Finance	40 00	
Commissioners for Opening Streets	75 00	
Commissioner of Street Cleaning	85 00	
Comptroller	60 00	
Amounts carried forward	$3,709 88	$8,978 67

Amounts brought forward	$3,709 88	$8,978 67
Department of Legislative Reference	150 00	
Electrical Commission	55 00	
Free Public Bath Commission	70 83	
Harbor Board	40 00	
Health Department	1,700 00	
Inspector of Buildings	128 00	
Jail Board	100 00	
Juvenile Court	114 14	
Law Department	35 00	
Mayoralty	152 50	
Municipal Factory Site Commission	190 00	
Municipal Journal	305 36	
Park Board	170 00	
Paving Commission	169 00	
People's Court	20 00	
Quarantine Hospital	5 00	
Sewerage Commission	770 00	
Superintendent of Lamps and Lighting	51 35	
Superintendent of Public Buildings	10 02	
Supervisors of City Charities	240 00	
Sydenham Hospital	37 61	
Topographical Survey Commission	22 94	
Water Engineer's Department	390 00	
		8,636 63
Balance carried to 1914		$342 04

PUBLIC SERVICE COMMISSION (19).

Salaries, appropriation	$8,800 00

EXPENDITURES.

Chairman, Philip D. Laird	$3,000 00	
Commissioner, Joshua W. Herring	1,499 94	
" Albert G. Towers	333 33	
" E. Clay Timanus	2,000 02	
Counsel, W. Cabell Bruce	1,800 00	
		8,633 29
Balance to Surplus 1913		$166 71

REVENUE (19).

Received from various sources	$752 93
Paid into city treasury	752 93

2. PUBLIC SAFETY

POLICE DEPARTMENT A—VI (20).

Salaries, appropriation	$1,200,522 47

EXPENDITURES.

Commissioner, Morris A. Soper	$2,500 00	
" Daniel C. Ammidon	2,500 00	
" Alfred S. Niles	2,500 00	
Secretary, Josiah A. Kinsey	3,365 27	
Assistant Secretary, Robert G. Claypoole	1,800 00	
Counsel, Robert F. Stanton	2,000 00	
Marshal, Thomas F. Farnan	3,400 00	
Deputy Marshal, James Manning	2,800 00	
Secretary to Marshal, John Swigert, Jr	1,800 00	
Police Physician, James M. Craighill	1,500 00	
" " Thomas P. McCormick	1,000 00	
" " Hubert C. Knapp	1,000 00	
" " E. H. Hutchins	1,000 00	
" " Walter F. Sowers	1,000 00	
10 Police captains	21,320 00	
22 Lieutenants	36,101 17	
25 Detectives	31,650 00	
Amounts carried forward	$117,236 44	$1,200,522 47

Amounts brought forward	$117,236 44	$1,200,522 47
16 Round sergeants	20,800 00	
132 Squad sergeants	150,273 18	
718 Patrolmen	725,131 64	
72 Probationers	79,548 80	
16 Turnkeys	16,628 57	
8 Station house clerks	9,655 85	
16 Telephone operators	13,796 00	
Superintendent of matrons	1,040 00	
18 Matrons and substitutes	15,492 81	
4 Boat engineers and firemen	3,952 00	
5 Electrical linemen	5,140 01	
2 Stenographers	2,080 00	
Clerks	1,445 72	
2 Station house firemen	1,042 00	
6 Hostlers	4,023 00	
19 Chauffeurs	14,164 42	
15 Janitresses	8,260 64	
2 Machinists	1,022 00	
Laborers	649 14	
		1,191,382 22
Balance to Pensioners, 1914		$9,140 25

Expenses, apropriation	$65,125 00

EXPENDITURES.

Gas and electric lighting		$3,509 49	
Badges and numbers		64 00	
Ice		423 00	
Fuel		4,488 25	
Stationery and printing		4,499 78	
Advertising		328 39	
Revolvers and ammunition		242 99	
Electrical supplies		4,088 86	
Station house supplies		4,080 24	
Repairs to station houses		6 75	
Rental of stables		72 00	
Horses		915 00	
Harness and wagons		255 05	
Motor vehicles and maintenance		16,781 71	
Miscellaneous stable expenses		349 95	
Shoeing of horses		837 00	
Feed and bedding		2,261 92	
Meals, officers and prisoners		1,847 05	
Rental of telephones		4,531 72	
Incidental expenses, headquarters		10,402 25	
Police patrol boats:			
Repairs	$1,865 11		
Supplies	1,185 16		
Insurance	150 00		
		3,200 27	
Bonding of officers		450 00	
			63,635 67
Balance to Surplus 1913			$1,489 33

POLICE EXAMINERS (20).

Salaries, appropriation	$4,800 00

EXPENDITURES.

Police Examiner, C. J. T. Gould	$1,200 00	
" " George A. Solter	1,200 00	
" " Edward Duffy	1,200 00	
Secretary, James W. Clayton	1,200 00	
		4,800 00

Expenses, appropriation	$1,302 00

EXPENDITURES.

Printing and stationery	$107 08	
Advertising	59 78	
Telephone	66 00	
Amounts carried forward	$232 86	$1,302 00

Amounts brought forward	$232 86	$1,302 00
Janitress	415 80	
Hiring of chairs, repairs	46 84	
Ice and towels	41 70	
Operators for examination questions	184 30	
		921 50
Balance to Surplus 1913		$380 50

PENSIONERS (20).

Appropriation	$48,531 03	
Balance brought forward from 1912	2,568 76	
		$51,099 79

EXPENDITURES.

Retired officers of the Police Department:		
Eastern District	$6,915 65	
Northeastern District	8,978 41	
Northern District	4,049 29	
Central District	9,470 12	
Western District	5,793 55	
Northwestern District	4,619 36	
Southern District	6,872 64	
Southwestern District	5,521 90	
Headquarters	1,693 51	
	$53,914 43	
Paid out of Police Department funds	2,814 64	
Paid by city		51,099 79

The above covers but seven months, the remaining five months of the year being paid by the Police Department out of its own funds, over which funds the city has no control, because of the fact that the department is a State institution. The city is responsible for its salaries and expenses and any deficiency in the pension fund.

FIRE DEPARTMENT A—VI (21).

Salaries, appropriation		$764,335 00

EXPENDITURES.

President, Richard H. Johns	$1,500 00	
Commissioner, Col. Israel Rosenfeld	249 99	
" Isaac Frank	730 33	
" Sidney T. Manning	1,000 00	
Secretary and Clerk, P. W. Wilkinson	1,650 00	
Acting Assistant Clerk, Maurice W. Uhler	900 00	
Chief Engineer, August Emrich	2,750 00	
Deputy Chief Engineer, Levin W. Burkhardt	2,000 00	
District Engineer, James T. Dunn	1,500 00	
" " John L. Emerson	1,500 00	
" " Frederick Branan	1,500 00	
" " E. Louis Shipley	1,500 00	
" " James A. Campbell	1,500 00	
" " John Kahl	1,500 00	
" " Fielding H. Lucas	1,500 00	
" " Michael A. Lind	1,500 00	
Superintendent of Machinery, Thomas H. Meushaw	1,500 00	
Assistant Superintendent of Machinery, John N. Bletzer	1,300 00	
Superintendent of Fire Alarm Telegraph, Jas. B. Yeakle	2,000 00	
No. 1 Engine Company	11,721 49	
" 2 " "	11,650 45	
" 3 " "	11,809 18	
" 4 " "	12,234 33	
" 5 " "	11,586 69	
" 6 " "	12,268 72	
" 7 " "	12,290 02	
" 8 " "	11,711 11	
" 9 " "	12,319 11	
" 10 " "	11,708 03	
" 11 " "	12,183 76	
" 12 " "	11,654 23	
" 13 " "	12,305 72	
" 14 " "	11,674 14	
Amounts carried forward	$194,697 30	$764,335 00

Amounts brought forward	$194,697 30	$764,335 00
No. 15 Engine Company	22,318 57	
" 16 " "	12,861 74	
" 17 " "	11,767 71	
" 18 " "	11,720 05	
" 19 " "	12,319 61	
" 20 " "	12,287 77	
" 21 " "	11,724 62	
" 22 " "	11,652 36	
" 23 " "	12,285 97	
" 24 " "	11,710 26	
" 25 " "	11,697 79	
" 26 " "	11,625 35	
" 27 " "	11,694 11	
" 28 " "	11,714 75	
" 29 " "	11,706 44	
" 30 " "	11,683 23	
" 31 " "	11,707 55	
" 32 " "	11,666 41	
" 33 " "	11,717 73	
" 34 " "	11,705 66	
" 35 " "	788 17	
" 36 " "	11,678 54	
" 37 " "	11,625 47	
" 38 " "	11,713 38	
" 39 " "	19,557 66	
" 40 " "	10,040 60	
" 1 Truck Company	12,041 06	
" 2 " "	12,049 18	
" 3 " "	11,469 74	
" 4 " "	11,471 57	
" 5 " "	11,634 07	
" 6 " "	11,869 36	
" 7 " "	7,424 46	
" 8 " "	7,232 48	
" 9 " "	7,419 26	
" 10 " "	12,397 70	
" 11 " "	12,022 73	
" 12 " "	7,380 47	
" 13 " "	11,449 07	
" 14 " "	7,424 98	
" 15 " "	11,432 36	
" 16 " "	11,428 55	
" 17 " "	11,373 79	
" 1 Water Tower	3,816 30	
" 2 " "	4,867 20	
" 1 Hose Company	11,313 12	
" 2 " "	10,966 67	
Pumping Station	10,913 59	
Repair Shop	8,706 13	
Fire Alarm Telegraph Department	16,159 39	
		751,932 03
Balance to Surplus 1913		$12,402 97

Expenses, appropriation	$193,350 00	

RECEIPTS.

Baltimore County Commissioners	1,740 93	
Martin Wagner Co	847 50	
Paving Commission	343 11	
J. S. Young Co	127 90	
G. Ober & Sons Co	159 60	
Wise Brothers	133 90	
Indemnity, Emil Myers	500 00	
Transferred from Contingent Fund	700 00	
		$197,902 94

EXPENDITURES.

Apparatus	$3,659 25	
" repairs	11,744 52	
Accidents	2,994 73	
Feed	30,893 22	
Fuel	13,782 52	
Furniture	938 63	
Amounts carried forward	$64,012 87	$197,902 94

Amounts brought forward	$64,012 87	$197,902 94
Harness	571 70	
Horseshoeing	7,335 27	
Hose	12,120 00	
Electricity and gas	3,106 91	
Insurance	3,827 00	
Washing	7,333 00	
Sick	4,696 16	
Pensioners	24,994 68	
Fire alarm telegraph	17,158 04	
Cable for subways	9,058 15	
Fire alarm boxes	1,825 60	
Office expenses	880 48	
Miscellaneous	10,144 68	
Storeroom	10,775 49	
Pumping Station, fuel and oils	16,354 77	
Fireboats, fuel and oils	3,096 26	
Pipe line system, repairs	611 88	
		197,902 94

Pensions, Firemen's Widows, appropriation		$6,125 00

EXPENDITURES.

Catherine Freimann	$450 00	
Agnes Lindsay	450 00	
Laura V. Gesswein	450 00	
Joanna M. Braden	400 00	
Kate Mennigue	450 00	
Wilhelmina Franke	250 00	
Adeline Acomb	400 00	
Mary Gill	475 00	
Eva Wagner	400 00	
Christina Pugh	450 00	
Elizabeth Kerr	400 00	
Theresa Bowers	162 36	
Margaret A. Krampe	450 00	
Lottie C. Curry	300 00	
Mary A. McGraw	400 00	
		5,887 36
Balance to Surplus 1913		$237 64

Fireboat Cataract, appropriation		$65,000 00

EXPENDITURES.

Thomas D. Johnson	$400 00	
Spedden Shipbuilding Co	43,749 61	
Andrew J. Morse & Son	1,383 00	
Eureka Fire Hose Co	770 00	
		46,302 61
Balance carried forward to 1914		$18,697 39

Tractors, Engines, appropriation		$16,000 00

EXPENDITURES.

American-LaFrance Engine Co	$5,425 00	
Front-Drive Tractor Co	3,950 00	
		9,375 00
Balance carried forward to 1914		$6,625 00

Chassis, Hose Wagons, appropriation		$30,000 00

EXPENDITURES.

International Motor Co	$14,634 14	
White Motor Co	7,560 00	
Lord Baltimore Truck Co	7,000 00	
		29,194 14
Balance carried forward to 1914		$805 86

Hydrant Heads, appropriation		$5,775 00

EXPENDITURES.

Ross Valve Manufacturing Co		5,775 00

Repair Shop, Tools, appropriation		$4000 00

EXPENDITURES.

Kemp Machinery Co	$3,407 00	
Fairbanks Co.	1,593 00	
		4,000 00

Automobiles for District Chiefs, appropriation		$6,000 00

EXPENDITURES.

Motor Car Co	$1,300 00	
Auto Outing Co	1,200 00	
Colonial Motor Co	952 05	
White Motor Co	2,547 95	
		6,000 00

Creating Truck Company No. 18, appropriation	$7,425 00
Expenditures for salaries	7,191 11
Balance to Surplus 1913	$233 89

Extra Work, Pumping Station, Completion Pipe Line System, appropriation		$15,559 32

EXPENDITURES.

Edge Moor Iron Co	$2,962 60	
Allis-Chalmers Co.	504 50	
Crook, Kries & Co	5,630 66	
B. F. Bennett Building Co	5,152 48	
Sewerage Commission	258 30	
Pittsburgh Valve, Foundry and Construction Co	30 00	
		14,538 82
Balance carried forward to 1914		$1,020 50

Boiler, High Pressure Pumping Station, appropriation		$15,000 00

EXPENDITURES.

Edge Moor Iron Co	$14,000 00	
Crook, Kries & Co	1,000 00	
		15,000 00

LOT AND BUILDING ENGINE HOUSE No. 40 (21).

(Vicinity Light and Montgomery Streets.)

Balance brought forward from 1913	$22,242 32
" carried forward to 1914	22,242 32

LOT AND BUILDING ENGINE HOUSE No. 39 (21).

(Vicinity Fulton Avenue and Baker Street.)

Balance brought forward from 1913	$22,801 20
" carried forward to 1914	22,801 20

REVENUE (21).

Salaries returned	$103 08
Hose	257 70
Manure	414 00
Horses	965 75
Fire alarm boxes	154 60
" " " damage	102 50
" " service	350 25
Metals	370 18
Miscellaneous	112 40
Paid into city treasury	$2,830 46

COURTS A—VI (22).

COURT BAILIFFS, STENOGRAPHERS AND WATCHMEN (22).

Salaries, appropriation	$63,300 00	
Salary returned	150 00	
		$63,450 00

EXPENDITURES.

Bailiff, George A. Davis	$1,500 00	
" E. M. Staylor	1,500 00	
" Thomas M. Kent	1,500 00	
" Charles Eggleston	1,500 00	
" Joseph E. Quinn	1,500 00	
" John T. Barber	1,500 00	
" Stephen M. Crane	1,500 00	
" J. O. Ennis	1,500 00	
" Francis A. Elphring	1,500 00	
" Charles E. Grogan	1,500 00	
" Charles F. Yeager	1,500 00	
" Timothy Casey	1,500 00	
" Herman Shapiro	1,500 00	
" Levy Abrahams	1,500 00	
" Edward R. Folger	1,500 00	
" Oscar E. Cruse	1,500 00	
" Noble Pennington	1,500 00	
" Charles F. Peace	1,500 00	
" George B. Ely	1,500 00	
" Walter M. Jordan	1,500 00	
" John A. White	1,500 00	
" Wm. M. Conway	1,500 00	
" David W. Dempsey	1,500 00	
" John A. Reinhardt	889 11	
" Harry L. Streib	1,500 00	
" Meyer Bornheim	1,500 00	
" Frank E. Schraeder	1,500 00	
Stenographer, Theodore A. Poole	2,952 02	
" Lafayette P. Temple	1,850 00	
" John C. Davis	825 00	
" Charles S. Chesney	1,800 00	
" John J. Linney	1,800 00	
" Jack Salomon	2,146 20	
" Theodore A. Rettaliata	1,770 00	
" Walter J. King	2,040 00	
" Leonard A. Weinberg	1,870 00	
" Edward L. Koontz	1,670 00	
" Wm. Jerome Bracken	951 94	
" J. Edward McDonald	50 00	
Watchman, Samuel W. Taylor	900 00	
" Frederick Bayline	900 00	
" Simon V. Cullen	1,000 00	
		62,414 27
Balance to Surplus 1913		$1,035 73

CRIMINAL COURT (22).

Expenses, appropriation		$95,462 50

EXPENDITURES.

Debit balance from 1912	$1,000 81	
State's Attorney	25,570 00	
Clerk's fees	22,819 85	
Sheriff's fees	20,335 44	
Grand jurors	7,491 50	
Petty jurors	11,540 00	
Stenographers and typewriting	726 60	
Special medical examinations	595 00	
Med. and experts	578 30	
Witness in jail, railroad fares and interpreters	1,196 46	
Attorneys for prisoners	2,503 00	
Hotel, meals, etc., for jurors	403 83	
Printing, stationery, etc	106 00	
		94,866 79
Balance to Surplus 1913		$595 71

BALTIMORE CITY COURT (22).

Expenses, appropriation	$11,071 25	
Transferred from Contingent Fund	2,613 86	
Witness fee paid	1 00	
		$13,686 11

EXPENDITURES.

Clerk's fees, stationery and miscellaneous expenses	$1,623 21	
Sheriff's fees	465 20	
Habeas corpus cases	630 70	
Jurors, Courts Nos. 1 and 2	10,967 00	
		13,868 11

COURT OF COMMON PLEAS (22).

Expenses, appropriations		$7,393 70

EXPENDITURES.

Clerk's fees	$1,071 60	
Sheriff's fees	172 80	
Habeas corpus cases	520 00	
Jurors, Courts Nos. 1 and 2	3,969 50	
Stationery, postage and directory	80 30	
		5,814 20
Balance to Surplus 1913		$1,579 50

SUPERIOR COURT (22).

Expenses, appropriation	$13,162 65	
Transferred from Contingent Fund	794 05	
		$13,956 70

EXPENDITURES.

Clerk's fees and expenses	$1,752 10	
Making jury books and certificates	736 20	
Sheriff's fees	358 40	
Jurors, Courts Nos. 1 and 2	11,110 00	
		13,956 70

CIRCUIT COURT No. 1 (22).

Expenses, appropriation		$3,550 00

EXPENDITURES.

Rewriting and reindexing indexes	$2,800 00	
Mules Printing Co., loose leaf sheets	385 00	
Keeping court minutes, stationery, process to counties	329 05	
		3,514 05
Balance to Surplus 1913		$35 95

CIRCUIT COURT No. 2 (22).

Expenses, appropriation	$550 00

EXPENDITURES.

Process to counties, keeping court minutes and stationery	222 10
Balance to Surplus 1913	$327 90

ORPHANS' COURT (22).

Salaries, appropriation		$10,016 00

EXPENDITURES.

Judge, Meyer J. Block	$2,808 00	
" Wm. M. Dunn	2,808 00	
" Harry C. Gaither	2,808 00	
Bailiff, John R. Hudgins	1,560 00	
		9,984 00
Balance to Surplus 1913		$32 00

Expenses, appropriation		$100 00

EXPENDITURES.

Stationery and postage		48 00
Balance to Surplus 1913		$52 00

SUPREME BENCH (22).

Salaries, appropriation		$5,500 00

EXPENDITURES.

Judge, Henry Duffy	$500 00	
" James E. Gorter	500 00	
" Henry D. Harlan	500 00	
" H. Arthur Stump	500 00	
" James H. Ambler	500 00	
" Thomas Ireland Elliott	500 00	
" W. I. Dawkins	500 00	
" J. U. Dennis	500 00	
" Carroll T. Bond	500 00	
" Charles W. Heuisler	500 00	
" John J. Dobler	500 00	
		5,500 00

Expenses, appropriation		$1,930 00

EXPENDITURES.

Stenographer and Typewriter, Katie Goldstein	$460 00	
Library Bureau, unit cases and cards	139 25	
Printing and stationery	238 35	
Postage	150 87	
		988 47
Balance to Surplus 1913		$941 53

SUPREME BENCH, TRUST DEPARTMENT (22).

Expenses, appropriation		$200 00

EXPENDITURES.

Lucas Brothers, stationery		46 30
Balance to Surplus 1913		$153 70

JUVENILE COURT (22).

Salaries, appropriation		$11,700 00

EXPENDITURES.

Judge, T. J. C. Williams	$3,000 00	
Associate Judge, James J. Carmody	1,000 00	
Probation Officer, James W. Harry	1,200 00	
" " J. Morrison Diven	1,200 00	
" " Wm. Mueller	1,200 00	
" " Mary Cathcart	1,200 00	
" " Lorraine Reinhard	1,200 00	
Clerk, A. Victoria Whittington	1,000 00	
Stenographer, Margaret McDonnell	691 55	
		11,691 55
Balance to Surplus 1913		$8 45

Expenses, appropriation		$450 00

EXPENDITURES.

Bookbinding, City Directory and furniture	$41 25	
Car fares	158 06	
Printing and stationery	136 85	
Postage	113 84	
		450 00

PEOPLE'S COURT (22).

Salaries, appropriation		$37,600 00

EXPENDITURES.

Judge, Wm. M. Kerr	$2,499 96	
" Frederick T. Dorton	2,100 00	
" Harry N. Abercrombie	2,100 00	
" Charles T. Reifsnider	2,100 00	
" Abraham H. Fisher	700 00	
" J. R. M. Staum	1,353 33	
Chief Constable, James W. Lewis	1,800 00	
Constable, D. Ardin Carrick	1,200 00	
" Frank Armiger	1,200 00	
" John W. Hogan	1,200 00	
" Wm. H. Doe	1,200 00	
" J. Carroll Sullivan	1,200 00	
" James H. Foley	1,200 00	
" James B. Loane	1,200 00	
" James A. McCay	1,000 00	
" Wm. A. Mulcahy	1,000 00	
" Charles H. Williams	1,000 00	
" Lawrence Rogan	1,000 00	
" Thomas M. Cooney	1,000 00	
" Wm. J. Kennedy	1,000 00	
" Robert B. Stansbury	1,000 00	
" Edward A. McNeal	1,000 00	
" Isaac B. Weinberg	1,000 00	
" Joseph W. Connolly	1,000 00	
" N. Lee Goldsborough	1,000 00	
" Wm. P. Freeny	1,000 00	
" Wm. W. Johnson	1,000 00	
" Simon Buckner	1,000 00	
" John Bohe	1,000 00	
" John T. Gaffney	1,000 00	
Magistrate, R. M. Custe	10 00	
" J. W. Lohmuller	10 00	
" Jesse Ashman	10 00	
" N. R. Tyrrell	10 00	
" M. Harry Pairo	10 00	
" Otto Buehne	10 00	
" A. F. Eastwood	10 00	
" W. H. Watson	10 00	
" George W. Rhein	10 00	
		37,143 29
Balance to Surplus 1913		$456 71

Expenses, appropriation	$500 00	
Transferred from Contingent Fund	305 71	
		$805 71

EXPENDITURES.

Underwood Typewriter Co., machines	$267 32	
George W. Spager, law books	278 10	
Printing, stationery and postage	260 29	
		805 71

PEOPLE'S COURT—DEFICIT, 1912 (22).

Appropriation	$39,248 01
Deficit, account creation of Court by Legislature after passage of Ordinance of Estimates	34,487 69
Balance to Surplus 1913	$4,760 32

PEOPLE'S COURT—REVENUE (22).

Received	$24,125 77
Paid into city treasury	24,125 77

MAGISTRATES (22).

Appropriation		$21,400 00

EXPENDITURES.

Police Magistrate,	A. Crawford Smith (Eastern Dist.)	$2,100 00	
“ “	Geo. D. Dean (Northeastern Dist.)	2,100 00	
“ “	E. J. Griffin, Jr., (Northern Dist.)	2,100 00	
“ “	J. F. Supplee, Jr. (Central Dist.)	2,100 00	
“ “	J. A. Saylor, Jr., (Western Dist.)	2,100 00	
“ “	Wm. T. Henry (Northwestern Dist.)	2,100 00	
“ “	M. A. Levinson (Southern Dist.)	2,100 00	
“ “	H. A. Ulrich (Southwestern Dist.)	2,100 00	
“ “	Geo. W. Golden (at large)	2,100 00	
“ “	Wm. N. McFaul (at large)	2,100 00	
Substitutes		197 53	
			21,197 53
Balance to Surplus 1913			$202 47

SPECIAL MEDICAL EXAMINATIONS (22).

Appropriation	$700 00
Expended	615 00
Balance to Surplus 1913	$85 00

FINES (22).

By Central Station police magistrate	$589 18	
“ Western Station police magistrate	333 00	
“ Northwestern Station police magistrate	765 00	
“ Southern Station police magistrate	288 00	
“ Southwestern Station police magistrate	132 00	
“ Eastern Station police magistrate	863 00	
“ Northern Station police magistrate	449 00	
“ Northeastern Station police magistrate	545 00	
“ at large magistrates	603 50	
“ sheriff	1,867 99	
“ Juvenile Court	64 00	
		$6,499 67
Remitted by Mayor		89 00
Balance paid into city treasury		$6,410 67

REMOVED CASES (22).

RECEIPTS.

Removed from:		
Anne Arundel County—		
Sarah Silver vs. P., B. & W. R. R.	$102 42	
Rose Jewell vs. Paul Armstrong	51 21	
Baltimore County—		
Clifton L. Murray vs. Thomas P. Pierpont	204 84	
Josh. Alex. Kane vs. E. P. Lindsay	102 42	
Somerset County—		
State of Maryland vs. Wesley Miles	192 71	
		$653 60

PAYMENTS.

Removed to:		
Howard County—		
State of Maryland vs. Carmello Liberto	$810 20	
Baltimore County—		
State of Maryland vs. Charles Lang	349 15	
		1,159 35
Debit charged to general revenue		$505 75

LIBRARY COMPANY OF THE BALTIMORE BAR (22).

Appropriation	$2,500 00
Paid Library Company of the Baltimore Bar	2,500 00

REGISTRATION APPEALS (22).

Transferred from Contingent Fund	$19 50
Payment	19 50

HEALTH DEPARTMENT A—VI (23).

COMMISSIONER OF HEALTH (23).

Salaries, appropriation	$131,780 00	
Transferred from Contingent Fund	3,600 00	$135,380 00

EXPENDITURES.

Commissioner of Health, James Bosley, M. D.	$192 88	
" " " Nathan R. Gorter, M. D.	3,217 75	
Asst. Comm. of Health, C. Hampson Jones, M. D.	3,000 00	
Health Warden, Oscar L. Long, M. D.	900 00	
" " H. E. Laroque, M. D.	900 00	
" " Augustine Palmisano, M. D.	900 00	
" " H. K. Gorsuch, M. D.	900 00	
" " J. E. Heard, M. D.	900 00	
" " J. T. Spicknall, M. D.	900 00	
" " A. L. Retalliata, M. D.	900 00	
" " J. W. France, M. D.	900 00	
" " C. T. Buckner, M. D.	900 00	
" " Bernard Wess, M. D.	900 00	
" " C. E. Downes, M. D.	900 00	
" " E. A. Munoz, M. D.	900 00	
" " H. H. Von Dreele, M.D.	900 00	
" " E. K. Ballard, M. D.	900 00	
" " C. Frank Jones, M. D.	900 00	
" " G. A. Theide, M. D.	900 00	
" " George W. Hemmeter, M. D.	900 00	
" " Fred H. Vinup, M. D.	900 00	
" " J. Harry Ullrich, M. D.	900 00	
" " Wm. A. Knell, M. D.	900 00	
" " A. E. Muse, M. D.	900 00	
" " J. E. Poulton, M. D.	900 00	
" " C. P. Erken-Brack, M. D.	900 00	
" " Charles B. Whetle, M. D.	900 00	
Secretary, M. Harry Laib	1,745 84	
Clerk to Bureau of Vital Statistics, Charles Busick	1,200 00	
Statistician, Howard A. Moore	1,175 84	
Permit Clerk, Harry C. Andrews	1,000 00	
" " Robert R. Krauter	1,000 00	
Clerk to Asst. Commissioner, C. Victor Dennis	900 00	
Registrar's Clerk, George C. Wedderburn	900 00	
Complaint Clerk, Thomas Burgess	900 00	
Index Clerk, Maurice W. Joint	825 00	
" " James J. O'Meara	66 42	
Medical Examiner, N. G. Keirle, M. D.	1,500 00	
Asst. Medical Examiner, H. G. Branham, M.D.	500 00	
Throat Inspector, W. P. Stubbs, M. D.	500 00	
" " B. P. Herzog, M .D.	500 00	
Bacteriologist, Wm. Royal Stokes, M. D.	1,787 50	
Asst. Bacteriologist, F. W. Hachtel, M. D.	1,500 00	
" " Wm. J. Schmitz, M. D.	1,200 00	
" " Raymond Freas, M. D.	1,000 00	
" " (water work) Fred Berger	480 00	
Clerk to Bacteriological Lab., Harry C. Cambpell	947 92	
Collector for Bacteriological Lab., Edward F. Kelly	900 00	
Bacteriological Laboratory Assistant, G. Harry Rush	900 00	
Laboratory Assistant, George Considine	10 00	
" Diener, Albert League	170 00	
" " John Thomas	25 00	
" " Harry J. Maloney	297 50	
" " Lee Clarke	20 00	
" " Wm. C. McCormick	240 00	
Chemist, Fred C. Blanck	2,000 00	
Assistant Chemist, C. Clifton Howes	1,200 00	
" " Harry B. Siegmund	796 67	
" " R. S. Craig	690 00	
Chemical Laboratory Assistant, Charles McLaughlin	398 34	
" " " George Considine	30 00	
" " " W. F. Harrison	90 00	
" " " Eugene D. Thomas	210 00	
" " Clerk, Michael Gahan	900 00	
Stenographer and Clerk, H. L. Carman	690 00	
Chief Food Inspector, Wm. P. Palmer	1,200 00	
Amounts carried forward	$58,406 66	$135,380 00

Amounts brought forward	$58,406 66	$135,380 00
Dairy Farm Inspector, Harry P. Carey	1,035 00	
“ “ “ Robert H. Wempe	1,035 00	
“ “ “ John S. Fulton, Jr.	1,035 00	
Food Inspector, George Belzner	900 00	
“ “ Phillip T. Meagher	900 00	
“ “ Charles R. Roehner	900 00	
“ “ B. Kerns	900 00	
“ “ Joseph Sapp	900 00	
“ “ John Miller	900 00	
“ “ George J. Fischer	900 00	
“ “ George H. Lentz	900 00	
“ “ Michael J. Buckley	150 00	
“ “ Carter Hall	750 00	
“ “ John Behr	900 00	
“ “ George A. Brady	900 00	
“ “ E. B. Christopher	862 50	
Inspector of Bakeries, Rudolph Weber	900 00	
“ “ Cow Stables, George F. Schultz	900 00	
Stenographer, Bertha M. Muller	720 00	
Telephone Operator, Ola Tracey	480 00	
Chief Tenement House Inspector, D. W. Smith, M. D.	1,200 00	
Tenement House Inspector, John A. Kelly	900 00	
“ “ “ Abraham Lasch	900 00	
Chief Plumbing Insepector, C. I. Putts, Jr.	1,595 84	
Assistant Plumbing Inspector, Wm. Odend'hal	450 00	
“ “ “ John A. Truelove	450 00	
“ “ “ John J. Gessler	900 00	
“ “ “ Thomas L. Sullivan	900 00	
“ “ “ Henry H. Smith	900 00	
“ “ “ Robert A. Reed	900 00	
“ “ “ Wm. E. Dorsey	900 00	
“ “ “ Michael J. Gorman	900 00	
“ “ “ Wm. C. Frostburg	37 50	
“ “ “ Edward F. Forster	862 50	
“ “ “ Eugene R. Pruitt	900 00	
“ “ “ Joseph I. Curran	900 00	
“ “ “ J. O. Griffith	900 00	
“ “ “ Wm. J. Kneise	900 00	
“ “ “ Wm. J. Martin	900 00	
“ “ “ Charles F. Hagan	862 50	
“ “ “ Francis A. Ebberts	862 50	
Inspector of Drains, Lawrence C. Rosendale	900 00	
Chief Clerk to Plumbing Division, Frank B. Wood	995 84	
Clerk to Plumbing Division, Charles H. P. Coe	900 00	
“ “ “ “ G. W. Sndyer	862 50	
“ “ “ “ Edward Hopkins	862 50	
“ “ “ “ Robert T. Paterson	862 50	
“ “ “ “ James E. Farrell	799 55	
Nuisance Clerk, Edward Thompson	900 00	
Superintendent of Fumigation, Wm. E. Woodall	1,200 00	
Supt. and Engineer of Morgue, August Ritmiller	1,200 00	
Fumigator, George W. Phillips	800 00	
“ Joseph Fitzsimmons	800 00	
“ Meyer Raitzyk	800 00	
“ Wm. M. Stanton	800 00	
“ H. G. Seidell	666 60	
“ Frank H. Seidell	133 40	
Chauffeur, Carroll McDermott	690 00	
Driver of Funeral Wagon, Thomas Gratton	720 00	
“ “ “ “ Wm. H. Bucheimer	720 00	
“ “ Disinfecting Wagon, Thomas Morse	720 00	
“ “ “ “ Thomas Reynolds	720 00	
Med. Examiner of Schools, H. Warren Buckler, M. D.	600 00	
“ “ “ “ I. R. Page, M. D.	500 00	
“ “ “ “ A. L. Fehsenfeld, M. D.	100 00	
“ “ “ “ Henry Kolb, M. D.	600 00	
“ “ “ “ A. K. Bond, M. D.	600 00	
“ “ “ “ R. A. Urquhart, M. D.	600 00	
School Nurse, Virginia B. Lorentz	600 00	
“ “ Marie A. Gorter	600 00	
“ “ Sally L. Jean	500 00	
“ “ Olivia C. Dawson	100 00	
“ “ Henrietta E. Knorr	600 00	
“ “ Agnes P. Kloman	600 00	
Statistical Clerk, Lucy I. Cowell	600 00	
Amounts carried forward	$116,947 89	$135,380 00

Amounts brought forward	$116,947 89	$135,380 00
Chief Tuberculosis Nurse, Ellen N. LaMotte	650 00	
Tuberculosis Nurse, Eleanor Jones	550 00	
" " Elizabeth C. Lee	900 00	
" " Mary L. Kelly	900 00	
" " Lillian Oeligrath	900 00	
" " Jennie B. Newman	900 00	
" " Margaret Kennedy	900 00	
" " Mary Raab	900 00	
" " George A. Hutton	112 50	
" " Sarah W. Crowsley	225 00	
" " Eleanor Jones	150 00	
" " Rebecca M. Coale	412 50	
" " Ida L. Lilly	900 00	
" " D. M. Stauffer	900 00	
" " L. M. Schroeder	900 00	
" " Johanna W. Tuve	900 00	
" " Ellen M. Hellier	900 00	
" " Frances W. Sprecher	900 00	
" " Clifford Geffchen	750 00	
" " Luli Carter	150 00	
Playground Nurse, Olivia C. Dawson	150 00	
" " Virginia B. Lorentz	150 00	
Extra Vaccine Physician, W. D. Olmsted, M. D.	150 00	
" " " Charles P. Clautice, M.D.	150 00	
" " " Wm. F. Skillman, M. D.	150 00	
" " " H. J. Powers, M. D.	145 00	
" " " F. O. Barrett, M. D.	150 00	
" " " G. F. Hartzell, M. D.	150 00	
" " " Frank J. Doyle, M. D.	130 00	
" " " H. E. Wooden, M. D.	120 00	
" " " Benj. J. McCleary, M. D.	150 00	
" " " J. A. Insley, M. D.	150 00	
" " " H. H. Weinberger, M. D.	150 00	
" " " Jos. L. Valentine, M. D.	150 00	
" " " John Wade, M. D.	150 00	
" " " John Girdwood, M. D.	150 00	
" " " L. J. Turlington, M. D.	150 00	
" " " John L. Schweinberg, M. D.	45 00	
" " " Henry E. Lee, M. D.	150 00	
" " " Frank J. Sebald, M. D.	150 00	
" " " Maurice Chideckel, M. D.	150 00	
" " " John J. Morrissey, M. D.	150 00	
" " " Henry C. Houck, M. D.	145 00	
" " " Edward E. Altvater, M. D.	150 00	
" " " L. L. Lloyd, M. D.	150 00	
" " " John W. Linthicum, M. D.	140 00	
" " " Thomas A. Stevens, M. D.	115 00	
" " " H. Young Westbrook, M. D.	5 00	
" " " H. A. O'Neill, M. D.	10 00	
		134,602 89
Balance to Surplus 1913		$777 11

Expenses, appropriation	$32,950 00	
Receipts	1 84	
Transferred from Contingent Fund	7,371 37	
		$40,323 21

EXPENDITURES.

Fumigation, etc.	$3,642 02	
Car fare	2,582 39	
Advertising	27 25	
Subscriptions	246 88	
Sundry bills	3,028 07	
Coffins for poor	48 00	
Annual report, printing, etc.	693 95	
Morgue expenses	562 73	
Bacteriological laboratory	5,515 31	
Chemical laboratory	550 12	
Disinfectants	911 89	
Amounts carried forward	$17,808 61	$40,323 21

Amounts brought forward	$17,808 61	$40,323 21
Vaccine virus	6,674 50	
Digging graves	40 00	
Postage, etc.	1,875 00	
Livery, hiring, etc	5,130 04	
Diphtheria antitoxin	2,986 80	
Prevention of infectious diseases	2,439 37	
Care of city patients	34 94	
Tuberculosis Nurses' Division	409 42	
Dairy farm inspection	2,128 15	
Automobile expenses	784 34	
		40,311 17
Balance to Surplus 1913		$12 04

ABATEMENT OF NUISANCES (23).

Appropriation	$1,000 00	
Receipts	1,535 24	
Transferred from Contingent Fund	873 64	
		$3,408 88

EXPENDITURES.

Sewerage Commission	$624 09	
City Engineer's Department	104 35	
P. Flanigan & Sons	910 17	
Wm. Hellbach	127 16	
Charles A. Irwin	14 00	
T. Howard Boland	7 60	
Wm. Frosburg	61 27	
Odorless Excavating Apparatus Co	25 00	
		1,873 64
Balance to Surplus 1913		$1,535 24

QUARANTINE STATION (23).

Salaries, appropriation	$13,525 00	
Receipts	1 96	
Transferred from Contingent Fund	964 64	
		$14,491 60

EXPENDITURES.

Quarantine Officer, Thomas L. Richardson, M. D.	$3,000 00	
Asst. Quarantine Officer, A. D. Driscoll, M. D.	1,445 00	
“ “ “ Edward G. Altvater, M. D.	245 00	
Captain No. 1, James C. Evans	840 00	
“ “ 2, Wm. T. Green	585 00	
“ “ 2, David Wood	121 86	
Engineer, No. 1, John Kellner	840 00	
“ “ 2, Bernard E. Eckert	780 00	
Fireman No. 1, John L. Smith	660 00	
“ “ 2, Patrick McCauley	660 00	
Deckhand No. 1, Bernard McMahon	660 00	
“ “ 2, Alonzo Evans	660 00	
Messenger, George M. Streeper	660 00	
Gardner, John L. Matthu	660 00	
Nurse, M. T. Armacost	660 00	
Watchman, T. W. Merchant	47 14	
“ Charles H. Kronhardt, Jr	522 50	
Cook, Lula Martin	137 50	
“ Laura Dobson	62 50	
“ Clara Mason	25 00	
“ Adeline Snowden	75 00	
Laundress, Sarah Cook	200 00	
“ Lula Martin	30 00	
“ Clara Mason	10 00	
Extra Nurse, Laura Dobson	313 00	
“ “ Beulah Barclay	7 20	
Matron, Anna M. Summers	350 00	
		14,256 70
Balance to Surplus 1913		$234 90

Expenses, appropriation	$7,350 00	
Receipts	239 55	
Transferred from Contingent Fund	6,200 00	
		$13,789 55

EXPENDITURES.

Market supplies	$1,984 87	
Groceries	781 93	
General supplies	899 11	
Feed for horses	385 87	
Coal for buildings	393 14	
" " boats	1,228 92	
Ice	238 25	
Hospital supplies	150 66	
Farm supplies	4 80	
Repairs to boats	1,036 49	
Gasoline, coal oil, etc	380 71	
Hire of extra boat	142 50	
Maritime Exchange	300 00	
Sundry expenses	689 78	
Gas plant	140 00	
Tugboat boiler	4,529 21	
		13,286 24
Balance to Surplus 1913		$503 31

REVENUE—SALE OF BIRTH AND DEATH TRANSCRIPTS (23).

Receipts	$1,306 70
Paid into city treasury	1,306 70

QUARANTINE TONNAGE TAX (23).

Receipts	$20,879 56
Paid into city treasury	20,879 56

CORONERS (23).

Appropriation		$9,000 00

EXPENDITURES.

Thomas R. Chambers, M. D. (Central Dist.)	$1,000 00	
David I. Macht, M. D. (Northwestern Dist.)	1,000 00	
J. Frederick Hempel, M. D. (Southern Dist.)	1,000 00	
Elijah J. Russell, M. D. (Eastern Dist.)	1,000 00	
Michael A. Abrams, M. D. (Southwestern Dist.)	1,000 00	
Henry C. Algire, M. D. (Northern Dist.)	1,000 00	
Robert G. Davis, M. D. (Northwestern Dist.)	1,000 00	
J. O. Jeffers, M. D. (Western Dist.)	1,000 00	
Henry C. Hyde, M. D. (at large)	1,000 00	
		9,000 00

INSPECTOR OF BUILDINGS A—VI (24).

INSPECTOR OF BUILDINGS (24).

Salaries, appropriation		$60,360 00

EXPENDITURES.

Inspector of Buildings, C. E. Stubbs	$4,000 00	
Asst. Inspector of Buildings, J. J. Byrne	1,595 83	
Secretary, A. W. Cooper	1,700 00	
District Inspector, B. G. Hawks	1,200 00	
" " J. R. Degenhardt	1,200 00	
" " H. L. Hutchinson	1,200 00	
" " J. W. Ringrose	1,200 00	
" " Wm. H. Schultz	1,200 00	
" " A. L. Brown	1,200 00	
" " P. D. Copeland	1,200 00	
" " J. L. Wartman	1,200 00	
" " R. J. Collins	1,200 00	
" " Wm. H. Wells	1,200 00	
" " L. Kuszmaul	1,200 00	
" " J. P. Wall	1,200 00	
Amounts carried forward	$21,695 83	$60,360 00

Amounts brought forward	$21,695 83	$60,360 00
Supt. of City Improvements, S. S. Schafer	1,595 83	
Asst. Supt of City Improvements, C. J. Byrne	1,200 00	
“ “ “ “ “ T. McCreer	1,200 00	
Examiner, J. J. Purcell	1,200 00	
“ George S. Hughes	992 86	
Draftsman, L. Schoenlein, Jr	1,200 00	
Engineer, Steel and Concrete, C. H. Osborne	1,795 00	
Inspector, Steel and Concrete, D. D. Sheesley	1,500 00	
Counter Clerk, J. J. Roddy	1,000 00	
“ “ Wm. H. Boone	900 00	
Notice Clerk, Frank Lewis	1,000 00	
Building Permit Clerk, Wm. F. Edwards	1,000 00	
“ “ “ Wm. J. Hickey	75 00	
“ “ “ James McDonnell	900 00	
“ “ “ T. C. Disney	811 69	
Record and File Clerk, John J. McGrath	1,000 00	
Furnace Inspector, Ignatus Burns	1,500 00	
Clerk to Furnace Inspector, A. B. Thompson	900 00	
Steam Plant Inspector, John J. Ward	1,680 00	
Clerk to Steam Plant Inspector, Wm. G. Reilly	1,000 00	
Electric Inspector, L. L. Kingsbury	1,680 00	
“ “ J. N. Shew	1,400 00	
“ “ C. H. Gantz	1,400 00	
Clerk, Electric Work, J. F. O'Mailey	1,200 00	
“ “ “ J. L. Hasson	900 00	
Elevator Inspector, C. P. Brown	1,200 00	
“ “ Charles Hammond	1,150 00	
Gasoline Inspector, Wm. H. W. Reed	1,200 00	
Fire Gong Inspector, W. H. Hebler	1,200 00	
Clerk and Stenographer, J. F. Voglein	695 82	
Gas Pipe Inspector, P. A. Sullivan	1,200 00	
“ “ “ Albert Share	1,200 00	
Smoke Inspector, E. A. Thompson	1,500 00	
		60,072 03
Balance to Surplus 1913		$287 97

EMPTYING CESSPOOLS (24).

Appropriation	$300 00	
Transferred from “Contingencies”	30 85	
		$330 85
Expended		330 85

LIVERY AND TRANSPORTATION (24).

Appropriation	$1,800 00
Expended for car fares	1,711 00
Balance to Surplus, 1913	$89 00

INCIDENTALS (24).

Apropriation		$400 00

EXPENDITURES.

Postage	$122 35	
Supplies	276 84	
		399 19
Balance to Surplus, 1913		$0 81

CONTINGENCIES (24).

Appropriation		$20,000 00

EXPENDITURES.

Transfers:			
Addition to School No. 99	$400 00		
Emptying cesspools	30 85		
Repairs to city property consolidated	5,042 40		
		$5,473 25	
Amounts carried forward		$5,473 25	$20,000 00

Amounts brought forward		$5,473 25	$20,000 00
Repairs at Quarantine Station, incident to "Alum Chine" explosion:			
Robinson & Johnson, glazing and painting	$710 00		
Singer-Pentz Co., repairs	940 11		
John Werner, glass and paint supplied	459 36		
		2,109 47	
Colonial Motor Car Co., automobile		1,315 00	
W. G. Cornell & Co., heating City Hall and Court House from High Pressure Pumping Station		7,018 68	
P. T. Barry Co., sewerage and drainage, Court House		2,346 01	
C. Herbold & Son, repairs at Eastern High School		1,737 30	
Topographical Survey Commission, blue prints		29	
			20,000 00

REPAIRS TO CITY PROPERTY CONSOLIDATED (24).

Appropriation	$161,700 00	
Refund	17 02	
Transferred from departmental contingencies	5,042 40	
		$166,759 42

EXPENDITURES.

Schools.

Administration Building	$1,425 91	
Baltimore City College	1,850 26	
Eastern High School	579 09	
Polytechnic Institute (Courtland St.)	419 25	
Polytechnic Institute (North ave.)	406 24	
Colored High and Training School	593 55	
Add'n to Colored High and Training School	2,267 00	
Western High School	3,530 15	
Parental School (Gilmor lane)	227 11	
Parental School (Catonsville)	1,536 46	
No. 1 School	862 39	
" 2 "	145 35	
" 3 "	1,726 14	
" 4 "	1,664 57	
" 5 "	1,169 37	
" 6 "	73 44	
" 7 "	316 04	
" 8 "	549 55	
" 9 "	288 25	
" 10 "	357 86	
" 11 "	1,143 00	
" 12 "	356 00	
" 13 "	312 88	
" 14 "	319 58	
" 15 "	370 75	
" 16 "	586 31	
" 19 "	474 34	
" 20 "	917 15	
" 21 "	182 85	
" 22 "	329 62	
" 23 "	366 64	
" 24 "	705 03	
" 25 "	607 72	
" 26 "	316 04	
" 27 "	561 69	
" 28 "	229 74	
" 29 "	542 32	
" 30 "	1,287 72	
" 31 "	233 83	
" 32 "	647 27	
" 33 "	230 66	
" 34 "	309 99	
" 35 "	1,537 99	
" 37 "	482 27	
" 38 "	162 59	
" 39 "	347 55	
" 40 "	1,010 18	
" 42 "	318 69	
" 43 "	706 97	
" 44 "	56 93	
Amounts carried forward	$35,672 28	$166,759 42

Amounts brought forward	$35,672 28		$166,759 42
No. 45 School	413 12		
“ 47 “	454 18		
“ 48 “	963 96		
“ 49 “	856 96		
“ 50 “	387 14		
“ 50 Branch School	85 00		
“ 51 School	564 58		
“ 52 “	452 98		
“ 53 “	768 33		
“ 54 “	283 96		
“ 55 “	1,050 98		
“ 57 “	547 08		
“ 58 “	688 11		
“ 58 Branch School	105 39		
“ 59 School	647 36		
“ 60 “	806 37		
“ 60 Branch School	30 00		
“ 61 School	383 69		
“ 62 “	2,457 13		
“ 63 “	326 58		
“ 64 “	229 16		
“ 65 “	4,310 25		
“ 66 “	495 13		
“ 67 “	1,142 37		
“ 68 “	1,270 55		
“ 70 “	691 40		
“ 71 “	680 08		
“ 72 “	631 65		
“ 73 “	376 86		
“ 74 “	1,113 10		
“ 75 “	908 04		
“ 76 “	538 69		
“ 77 “	322 36		
“ 78 “	1,436 57		
“ 79 “	399 52		
“ 80 “	606 31		
“ 81 “	636 46		
“ 82 “	322 92		
“ 83 “	655 15		
“ 84 “	1,526 12		
“ 85 “	601 46		
“ 86 “	906 08		
“ 91 “	49 98		
“ 92 “	147 16		
“ 93 “ East and West Branches	592 88		
“ 94 “	584 10		
“ 95 “	463 23		
“ 96 “	254 34		
“ 97 “	229 79		
“ 98 “	865 09		
“ 99 “	1,906 64		
“ 100 “	629 38		
“ 101 “	191 33		
“ 103 “	781 50		
“ 105 “	331 12		
“ 106 “	751 74		
“ 107 “	174 61		
“ 107 Branch School	31 59		
“ 108 School	305 97		
“ 109 “	145 38		
“ 109 Branch School	27 19		
“ 110 School	360 78		
“ 111 “	396 15		
“ 111 Branch School	116 46		
“ 112 School	574 16		
“ 113 “	794 69		
“ 115 “	56 22		
“ 116 “	145 73		
“ 118 “	29 70		
“ 118 Branch School	44 43	$78,726 69	
Engine Houses.			
No. 1 Engine Company	$246 45		
“ 2 “ “	274 44		
“ 3 “ “	278 83		
“ 4 “ “	141 49		
Amounts carried forward	$941 21	$78,726 69	$166,759 42

Amounts brought forward	$941 21	$78,726 69	$166,759 42
No. 5 Engine Company and No. 3 Truck Co.	469 28		
" 6 " "	386 24		
" 7 " "	230 23		
" 8 " "	15 22		
" 9 " "	353 10		
" 10 " "	318 92		
" 11 " "	262 59		
" 12 " "	112 28		
" 13 " "	800 04		
" 14 " "	142 00		
" 15 " "	652 33		
" 16 " "	262 22		
" 17 " "	135 16		
" 18 " "	265 73		
" 19 " "	516 66		
" 20 " "	650 58		
" 21 " "	765 66		
" 22 " " and No. 17 Truck Co.	451 53		
" 23 " "	171 87		
" 24 " "	211 37		
" 25 " "	275 02		
" 26 " "	349 43		
" 27 " "	445 22		
" 28 " "	391 95		
" 29 " "	172 30		
" 30 " "	300 93		
" 31 " "	229 78		
" 32 " "	18 24		
" 33 " "	324 77		
" 34 " "	128 46		
" 36 " "	151 04		
" 37 " "	165 88		
" 38 " "	183 10		
" 39 " "	75 19		
		11,325 53	
Truck Houses.			
No. 2 Water Tower	$1,009 04		
" 1 Truck Company	100 50		
" 2 " "	1,409 88		
" 4 " "	451 21		
" 5 " "	246 66		
" 6 " "	216 86		
" 10 " "	889 66		
" 11 " "	1,083 32		
" 12 " "	183 04		
" 13 " "	181 05		
" 14 " "	168 39		
" 15 " "	108 58		
" 16 " "	164 68		
		6,212 87	
Markets.			
Belair Market	$195 72		
Broadway Market	498 84		
Canton Market	145 00		
Centre Market	2,769 33		
Cross Street Market	210 84		
Hanover Market	491 55		
Hollins Market	492 59		
Lafayette Market	53 82		
Lexington Market	413 41		
Northeast Market	790 39		
Richmond Market	232 45		
		6,293 94	
Police Stations.			
Central Police Station	$879 52		
Eastern Police Station	505 69		
Northern Police Station	1,930 75		
Southern Police Station	698 51		
Western Police Station	889 37		
Northeastern Police Station	1,019 58		
Amounts carried forward	$5.923 42	$102,559 03	$166,759 42

Amounts brought forward	$5,923 42	$102,559 03	$166,759 42
Northwestern Police Station	886 62		
Southwestern Police Station	955 26		
Patrol stables	19 12		
		7,784 42	
Street Cleaning Department.			
Fulton Avenue Stable	$1,301 63		
Greenmount Avenue Stables	137 16		
Pratt Street Stable	7,296 84		
Ridgely Street Stable	3,333 27		
		12,068 90	
Miscellaneous.			
City Hall	$10,189 02		
" " Annex No. 1	413 81		
" " " " 2	693 38		
Court House	7,364 24		
City Jail	8,841 21		
Bay View Asylum	10,611 12		
Sydenham Hospital	1,134 17		
Municipal Laboratory	288 08		
People's Court	1,883 26		
High Pressure Pumping Station	696 84		
Quarantine	1,208 89		
City Morgue	276 40		
Municipal Garage	570 62		
Construction Div., Water Dept., Holliday st.	36 80		
Old No. 4 Truck House	79 76		
Eastern Pumping Station	1 17		
1006 Sassafras street	25 30		
1704-1706 Barclay street	16 50		
1438 Madison street	16 50		
		44,347 07	
			166,759 42

RECAPITULATION.

Schools	$78,726 69	
Engine Houses	11,325 53	
Truck Houses	6,212 87	
Markets	6,293 94	
Police Stations	7,784 42	
Street Cleaning Department	12,068 90	
Miscellaneous	44,347 07	
		$166,759 42

MUNICIPAL GARAGE (24).

Appropriation	$4,500 00	
Receipts	3 12	
		$4,503 12

EXPENDITURES.

H. H. MacLellan, builder	$3,578 04	
Equipment (ordered through City Engineer's Dept.)	796 88	
Miscellaneous	128 20	
		4,503 12

SUPPLYING HEAT FROM HIGH PRESSURE PUMPING STATION TO CITY HALL AND COURT HOUSE (24).

Brought forward from 1912		$20,951 01

EXPENDITURES.

City Engineer's Department, paving	$1,916 45	
General Electric Co., electric work	55 00	
W. G. Cornell Co.; contractor	16,417 76	
		18,389 21
Balance carried forward to 1914		$2,561 80

ADDITIONAL ROOM AND SANITARY IMPROVEMENTS, CITY HALL (24).

Brought forward from 1912		$3,188 48
EXPENDITURES.		
Vaile & Young, tin work	$208 00	
Goldenberg Brothers, electric work	108 00	
H. Weller, heating	621 00	
Wm. A. Parr, carpentry	72 64	
J. McCrea & Son, plumbing	205 75	
Arundel Sand and Gravel Co., sand	9 80	
City Engineer's Department, labor	778 51	
		2,003 70
Balance to Surplus 1914		$1,184 78

3. PUBLIC CHARITY AND CORRECTION

HOSPITALS A—VI (25).

SUPERVISORS OF CITY CHARITIES (25).

City Patients in Hospitals.

Appropriation		$75,379 00
EXPENDITURES.		
Rate—Fifty Cents per Diem per Patient at Following Hospitals:		
Mercy Hospital	$17,071 50	
University of Maryland Hospital	10,412 00	
Maryland General Hospital	8,168 00	
St. Joseph's Hospital	9,987 00	
St. Agnes' Hospital	6,292 50	
Homeopathic Hospital	3,832 12	
Hospital for Crippled and Deformed Children	4,209 00	
Consumptives of Maryland Hospital	1,825 00	
Maryland State Tuberculosis Sanatorium	4,988 34	
Jewish Home for Consumptives	1,095 00	
Franklin Square Hospital	1,792 00	
		69,672 46
Balance to Surplus 1913		$5,706 54

SYDENHAM HOSPITAL (25).

Salaries, appropriation		$10,160 00
EXPENDITURES.		
Superintendent, S. T. Nicholson, Jr., M. D.	$2,000 00	
Asst. Physician, J. C. Stansbury, M. D.	214 52	
“ “ John F. Hagan, M. D.	375 00	
Superintendent of Nurses, Mary J. Putts	675 00	
“ “ “ Katie Wesley	37 50	
“ “ “ A. E. Hagen	75 00	
“ “ “ Fannie Michael	187 50	
Clerk, D. Edgar Fay	450 00	
Secretary, Alma Smith	100 00	
“ Venie A. Myer	25 00	
Supervisor, Katie Wesley	475 00	
Nurse, Lena C. Baker	245 00	
“ May Fuller	30 00	
“ Laura Fry	105 00	
“ Harriet Snyder	35 00	
“ Mae Seebold	384 51	
“ Carrie Hoffman	347 18	
“ May Fuller	10 00	
“ Helen Johanns	127 50	
“ Alice Caron	30 21	
“ Minnie Smith	20 00	
“ Gertrude Lee	131 53	
“ Isabel Mulick	17 50	
Amounts carried forward	$6,097 95	$10,160 00

Amounts brought forward	$6,097 95	$10,160 00
Cook, Mary Kennedy	300 00	
Laundress, Ella Rockel	181 25	
" Anna Hutchins	28 75	
" Mrs. Nicoll	2 50	
" Anna Weinbach	50 00	
" Sophia Lay	37 50	
" Ida Krebs	12 50	
Maid, Mary Straughn	30 00	
" Sophia Beyer	240 00	
" Margaret Lawrence	209 33	
" Mary O'Brien	240 00	
Orderly, Edward Meehan	20 00	
" Thomas Hutson	225 00	
" George Trice	135 00	
Laborer, George Trice	15 00	
Chauffeur, John Burns	365 00	
" Thomas Hutson	225 00	
Messenger, Joseph P. Butler	225 00	
" Edward Murphy	37 50	
" Edward Meehan	82 50	
Utility Man, Edward Vogler	690 00	
Special Nurse, Alice Caron	25 00	
" Guard, George Trice	137 90	
		9,612 68
Balance to Surplus 1913		$547 32

Expenses, appropriation	$10,650 00

EXPENDITURES.

Subsistence	$4,232 94	
Department expenses	2,309 89	
General house and property expense	1,925 45	
Capital expenses	302 58	
Professional care of patients	1,026 15	
Administration expenses	852 99	
		10,650 00

REVENUE (25).

Receipts, board of patients	$939 68
Paid into city treasury	939 68

INFECTIOUS DISEASES HOSPITAL (25).

Balance brought forward from 1912	$5,247 64
Receipts, rentals of Old Marine Hospital property lots	2,042 36
Balance carried forward to 1914	$7,290 00

HOME FOR SUPERINTENDENT OF SYDENHAM HOSPITAL (25).

Appropriation	$5,000 00	
Transferred from Contingent Fund	1,095 35	
		$6,095 35

EXPENDITURES.

Advertising and blue prints	$55 09	
Geiske & Thomas, architect commission	172 74	
C. Herbold & Son, contractor, building	3,949 20	
		4,177 03
Balance carried forward to 1914		$1,918 32

TUBERCULOSIS DISPENSARY (25).

Appropriation	$6,000 00

EXPENDITURES.

Salaries	$3,720 00	
Rent of dispensaries, janitor service and sundry exp.	2,268 56	
		5,988 56
Balance to Surplus 1913		$11 44

ADDITIONAL BUILDING, SYDENHAM HOSPITAL (25).

Balance brought forward from 1912		$29,909 10
Balance carried forward to 1914		29,909 10

INSANE A—VI (26).

CARE OF INSANE (26).

Appropriation		$171,500 00

EXPENDITURES.

Springfield State Hospital for the Insane, $100 per annum per patient	$79,200 93	
Spring Grove State Hospital for the Insane, $100 per annum per patient	37,084 40	
Mt. Hope Retreat, $150 per annum per patient	37,441 64	
Crownsville State Hospital for the Insane, $100 per annum per patient	2,382 25	
Physicians' certificates	819 00	
Entertainments (moving-picture shows for insane at Bay View Asylum)	245 80	
Transferring patients from one insane hospital to another	147 65	
Furniture, pictures and supplies for insane wards at Bay View Asylum	2,521 39	
Printing and raffia	18 97	
		159,862 03
Balance to Surplus 1913		$11,637 97

REVENUE (26).

Received for board of inmates in hospitals for insane	$18,209 91
Paid into city treasury	18,209 91

DESTITUTE CHILDREN A—VI (27).

DESTITUTE AND NEGLECTED CHILDREN (27).

Appropriation		$25,000 00

EXPENDITURES.

St. Vincent's Inf. Asylum, 23c. per diem each inmate	$2,160 22	
Nurs'y and Child's Hospital, 23c. per diem each inmate	1,713 34	
St. Elizabeth's Home, 23c. per diem each inmate	4,379 96	
St. Mary's Home for Little Colored Boys, 23c. per diem each inmate	1,283 40	
Maryland Home for Friendless Colored Children, 23c. per diem each inmate	807 30	
St. Katharine's Home for Little Colored Girls, 23c. per diem each inmate	265 19	
Home of the Friendless, 23c. per diem each inmate	801 09	
St. Vincent's Male Orphan Asylum, 25c. per diem each inmate	2,480 00	
St. Mary's Female Orphan Asylum, 27c. per diem each inmate	5,419 44	
St. Joseph's School of Ind'y, 27c. per diem each inmate	1,173 42	
	$20,483 36	
Changing and improving model of Children's Exhibit	30 01	
		20,513 37
Balance to Surplus 1913		$4,486 63

REVENUE (27).

Received for board of children in institutions	$135 00
Paid into city treasury	135 00

WORKHOUSES AND ALMSHOUSES A—VI (28).

SUPERVISORS OF CITY CHARITIES (28).

Salaries, City Offices, appropriation		$8,860 00

EXPENDITURES.

Secretary, Nathaniel G. Grasty	$2,500 00	
Visitor-in-Chief, T. James Hunter	1,400 00	
Admit Clerk, George Schuster	1,100 00	
Clerk and Visitor, Mrs. Emily Duvall	900 00	
Visitor, Miss Elizabeth S. Walsh	720 00	
" Miss Mary O. Simpson	720 00	
" Mrs. Lura B. Hepburn	660 00	
Clerk and Stenographer, Mrs. Mary H. Conway	720 00	
		8,720 00
Balance to Surplus 1913		$140 00

Expenses, City Offices, appropriation		$1,600 00

EXPENDITURES.

Car fare	$144 50	
Postage	244 67	
Printing	27 75	
Valentines, birthday and Easter cards, Christmas gifts for the poor	40 49	
Medical examination of children in institutions	50 00	
Railroad expenses	901 81	
Sundries	122 37	
Stereopticon and views	66 30	
		1,597 89
Balance to Surplus 1913		$2 11

BAY VIEW ASYLUM (28).

Salaries, appropriation	$67,118 00	
Wages returned	7 50	
Transferred from Contingent Fund	260 00	
		$67,385 50

EXPENDITURES.

Superintendent, Lamar Hollyday	$2,000 00	
Perveyor, D. E. Hammond	1,200 00	
6 Office Clerks	1,862 70	
Supervisor, Gus Neumann	900 00	
2 Assistant Supervisors	531 47	
Chief Engineer, J. J. Farrell	1,200 00	
Assistant Engineer, C. F. Farley	1,000 00	
" " Lee E. Norfolk	899 98	
2 Plumbers	791 13	
Matron, Mrs. M. E. Little	720 00	
2 Assistant Matrons	365 00	
Superintendent of Sewing Room, Mary Mercer	360 00	
2 Seamstresses	230 00	
Baker, C. C. Thomas	900 00	
2 Charge White Male Receiving Ward	110 00	
2 " " Female Receiving Ward	396 00	
2 " Colored Female Receiving Ward	385 44	
Carpenter, R. W. Thompson	720 00	
Farmer	729 68	
Farm Laborers	1,171 20	
Charge Children's Ward	216 00	
" Male Annex	180 00	
2 Visiing Physicians	330 00	
11 Firemen	2,098 06	
Head Laundress	352 50	
14 Laundry Helpers	515 23	
Physician-in-Chief, Thomas R. Boggs	2,925 00	
Surgeon-in-Chief, Arthur M. Shipley	1,000 00	
Resident Physicians	500 00	
" Surgeons	500 00	
Assistant Resident Physician	58 33	
18 Assistant Physicians, Ward "A"	710 57	
Amounts carried forward	$25,858 29	$67,385 50

Amounts brought forward	$25,858 29	$67,385 50
Superintendent of Nurses, Ward "A"	995 83	
Asst. Superintendent of Nurses, Ward "A"	720 00	
Night Superintendent of Nurses, Ward "A"	478 57	
6 Graduate Nurses, Ward "A"	1,289 68	
16 Assistant Nurses, Ward "A"	1,492 83	
25 Pupil Nurses, Ward "A"	1,217 35	
5 Special Nurses, Ward "A"	237 94	
2 Nurses, Chronic Hospital	320 00	
2 Apothecaries	655 00	
Physician-in-Chief, Phth. Hospital, Gordon Wilson	750 00	
2 Resident Physicians, Phth. Hospital	491 63	
7 Asst. Resident Physicians, Phth. Hospital	243 80	
2 Supervising Nurses, Phth. Hospital	900 00	
6 Head Ward Nurses, Phth. Hospital	978 91	
29 Asst. Nurses, Phth. Hospital	2,530 49	
Physician-in-Chief, Insane, R. P. Truitt	687 50	
" " Kenneth B. Jones	812 50	
3 Resident Physicians, Insane	628 57	
2 Asst. Physicians, Insane	91 67	
2 Supervisors, Male Insane	589 29	
2 Asst. Supervisors, Male Insane	420 00	
46 Male Attendants, Insane	3,782 78	
Supervising Nurse, Female Insane, Miss J. Swarner	600 00	
47 Female Attendants, Female Insane	5,101 32	
11 Cooks	1,936 47	
9 Asst. Cooks	270 63	
2 Stenographers	847 50	
Pathologist	443 75	
17 Engineer's Helpers	307 04	
Carriage Driver	240 00	
Gate Keeper, Henry Scheid	300 00	
27 Orderlies	1,504 18	
Watchmen, messengers, gate keepers and employes	3,557 21	
		61,280 73
Balance to Surplus 1913		$6,104 77

Expenses, appropriation	$155,589 00	
Refund by the H. B. Gilpin Co	5 55	
		$155,594 55

EXPENDITURES.

General subsistence, meats, groceries and provisions	$90,813 77	
Dry goods and clothing	6,513 09	
Bedding and blankets	3,228 25	
Drugs	4,855 70	
Hospital supplies	3,331 42	
Laboratory	196 92	
Coal	22,908 97	
Light	3,351 15	
Stables—Cost of feed and shoeing	1,342 16	
Laundry supplies	1,436 94	
Exchanging 4 cows	50 00	
Purchasing 17 cows	1,301 90	
" 2 horses	490 00	
" boar	26 95	
Minor improvements	939 93	
Labor roll	2,473 65	
Feed, painting, furniture, hardware, brooms, buckets, kitchen utensils, tinware, china, glassware, ordinary repairs, engineers' supplies	12,333 75	
		155,594 55

REVENUE (28).

Received from board of inmates and sale of old material	$724 03
Paid into city treasury	724 03

NEW BUILDINGS, BAY VIEW (28).

Brought forward from 1912		$57,805 76

EXPENDITURES.

John K. McIver	$39,202 47	
Topographical Survey Commission	3 29	
John R. Livesey	1,468 50	
Chatard & Norris	4,000 00	
Amounts carried forward	$44,674 26	$57,805 76

Amounts brought forward	$44,674 26	$57,805 76
Hutchinson Brothers	5,497 50	
J. B. Fluskey	85 00	
George F. Smith	3,200 00	
Parker, Thomas & Rice	1,444 52	
Otis Elevator Co	623 00	
J. H. Day	2,281 48	
		57,805 76

NEW IMPROVEMENTS, BAY VIEW ASYLUM, WARD "A" (28).

Balance brought forward from 1912	$3,259 06
" carried forward to 1914	3,259 06

EQUIPMENT AND INSTALLATION OF FIRE DOORS, BAY VIEW ASYLUM (28).

Appropriation		$29,000 00

EXPENDITURES.

Peck & Boughter	$90 00	
American-LaFrance Fire Engine Co	307 00	
Topographical Survey Commission	50 52	
Advertisements	22 32	
C. L. Reeder	633 96	
Fred. Decker & Son	3,150 00	
Singer-Pentz Co.	8,302 50	
		12,556 30
Balance carried forward to 1914		$16,443 70

COW BARNS AND STABLES, BAY VIEW ASYLUM (28).

Appropriation		$12,500 00

EXPENDITURES.

C. J. Gray & Son	$460 50	
Topographical Survey Commission	31 80	
Advertisements	10 14	
Parker, Thomas & Rice	283 23	
Fred. Decker & Son	8,097 50	
Cuyler & Mohler	227 74	
		9,110 91
Balance carried forward to 1914		$3,389 09

BUNGALOW FOR PHYSICIANS OF TUBERCULOSIS HOSPITAL, BAY VIEW ASYLUM (28).

Appropriation	$3,500 00	
Transferred from Contingent Fund	1,624 70	
		$5,124 70

EXPENDITURES.

Advertisements	$10 15	
Parker, Thomas & Rice	146 13	
Fred. Decker & Son	4,912 80	
		5,069 08
Balance carried forward to 1914		$55 62

LODGING HOUSES A—VI (29).

TEMPORARY CARE OF HOMELESS MEN (29).

Appropriation	$2,000 00

EXPENDITURES.

Friendly Inn, meals and lodging, 9,950 men at 20c. per day	1,990 00
Balance to Surplus 1913	$10 00

PRISONS AND REFORMATORIES A—VI (30).

BALTIMORE CITY JAIL (30).

Salaries, appropriation		$36,050 00

EXPENDITURES.

Warden, Bernard C. Lee	$1,999 92	
Clerk, Harry C. Martin	1,650 00	
Physician, George L. Wilkins	1,500 00	
Deputy Warden, James F. Macullar	373 33	
" " Guy L. Upperco	1,106 67	
Engineer, John McCusker	92 78	
" Louis Forster	999 97	
" Thomas Mitchell	995 80	
" Wm. F. Walters	499 99	
" George C. Smith	399 19	
Night Captain, Harry Klunk	999 97	
Keeper, John J. O'Donnell	900 00	
" John Stout	906 05	
" George Friese	900 00	
" Henry C. Lecron	900 00	
" John P. Towson	900 00	
" Joseph Steinberger	900 00	
" Wm. Stevenson	900 00	
" Henry H. Levelle	900 00	
" Mathew McGuire	900 00	
" Henry A. Schaub	900 00	
" Hugh O'Connor	902 42	
" Wm. Donaldson	897 58	
" Adam J. Kuhn	900 00	
" Wm. Graham	900 00	
" Henry W. Porcher	900 00	
" Peter Cull	904 84	
" Thomas Hopper	900 00	
" John H. Doud	900 00	
" Charles Howell	586 70	
" John W. McGrain	897 58	
" Augustus A. Shaw	899 92	
" James E. Murphy	900 00	
" Henry F. Kroeger	900 00	
" Joseph Cuneo	620 00	
" Robert J. Wentz	296 38	
Fireman, Wm. F. Kelly	720 00	
" John Dembinski	720 00	
Assistant to Physician, John J. Morrissey	64 50	
" " " Hertel P. Makel	427 12	
Matron, Marian Martin	720 00	
" Adele Drury	720 00	
" Ethel Sampson	720 00	
		36,020 80
Balance to Surplus 1913		$29 20

Expenses, appropriation		$27,500 00

EXPENDITURES.

Flour	$5,093 55	
Meats	6,090 61	
Fish	674 00	
General groceries	6,156 05	
Heating and lighting	1,069 53	
Machinery and supplies	1,492 18	
Clothing, dry goods, etc	2,168 23	
Sanitary	1,576 20	
Hospital drugs	770 95	
" subsistence	275 83	
Incidental expenses	750 67	
Extraordinary expenses, filters	382 20	
Warden's subsistence	1,000 00	
		27,500 00

REVENUE (30).

Maryland Button Co	$3,701 27
U. S. Marshal, for board of U. S. prisoners	1,392 00
U. S. Commissioner of Immigration, board of aliens	37 00
Amount carried forward	$5,130 27

Amount brought forward	$5,130 27	
U. S. Revenue Cutter Service, board of court-martial prisoners	71 20	
State of Maryland, board of county prisoners	1,906 00	
Sale of old material and miscellaneous	206 67	
		$7,314 14
Paid into city treasury		7,314 14

TRANSPORTATION TO HOUSE OF CORRECTION (30).

Appropriation	$500 00
EXPENDITURES.	
Paid B. & O. R. R. Co.	371 46
Balance to Surplus 1913	$128 54

REFORMATORIES (30).

Maintenance and Manual Training, appropriation	$121,940 00	
Balance brought forward from 1913, credit National Junior Republic	500 00	
		$122,440 00
EXPENDITURES.		
Maryland School for Boys, maintenance, $10 per month per capita	$7,800 00	
Maryland School for Boys, manual training, $8.33 1-3 per month per capita	6,500 00	
St. Mary's Industrial School, maintenance, $10 per month per capita	46,000 00	
Industrial Home for Colored Girls, maintenance, $8.33 1-3 per month per capita	6,000 00	
House of Good Shepherd, maintenance, $6.66 2-3 per month per capita	5,810 53	
House of Good Shepherd for Colored Girls, maintenance, $6.666 2-3 per month per capita	5,724 46	
Maryland Industrial School for Girls, maintenance, $10 per month per capita	3,971 74	
House of Reformation for Colored Boys, maintenance, $6.66 2-3 per month per capita	26,177 81	
National Junior Republic, maintenance, $10 per month per capita	1,534 66	
Exeter Street Rescue Home for Fallen Women, maintenance, $10 per month per capita	1,080 00	
Universal Progressive School for Orphan and Destitute Colored Children, maintenance, $6.66 2-3 per month per capita	....	
Florence Crittenton Mission, maintenance, $10 per month per capita	1,080 00	
The Boys' Home, maintenance, $10 per month per capita	1,560 00	
		113,239 20
		$9,200 80
Carried forward to 1914, credit of National Junior Republic		500 00
Balance to Surplus 1913		$8,700 80

MARYLAND SCHOOL FOR BOYS, REPAIRS AND IMPROVEMENTS (30).

Appropriation	$5,000 00
Expenditures	5,000 00

INDUSTRIAL HOME FOR COLORED GIRLS, NEW IMPROVEMENTS (30).

Appropriation	$1,500 00
Expenditures	1,500 00

MARYLAND INDUSTRIAL SCHOOL FOR GIRLS, REPAIRS (30).

Appropriation	$2,000 00
Expenditures	1,973 38
Balance to Surplus 1913	$26 62

MISCELLANEOUS A—VI (31).

DISPENSARY SERVICE (31).

Appropriation		$10,500 00

EXPENDITURES.

Eastern Dispensary	$1,200 00	
Northeastern Dispensary	1,424 60	
Baltimore General Dispensary	1,408 55	
Baltimore Eye, Ear and Throat Charity Hospital Dis.	700 00	
Fell's Point Dispensary	999 90	
Locust Point Dispensary	499 90	
City Medical Agency, Southern District	1,207 28	
" " " Northwestern District	1,286 91	
" " " Western District	1,522 99	
		10,250 13
Balance to Surplus 1913		$249 87

TRANSPORTATION OF POOR TO THEIR HOMES (31).

Appropriation	$1,000 00
Expended	510 73
Balance to Surplus 1913	$489 27

MARYLAND WORKSHOP FOR THE BLIND (31).

Appropriation	$5,000 00
Paid	5,000 00

PENSION, W. H. WAR (31).

Appropriation	$260 00
Paid	260 00

CARE OF HABITUAL DRUNKARDS (31).

Appropriation	$3,000 00	
Transferred from Contingent Fund	1,300 00	
		$4,300 00

EXPENDITURES.

Springer Sanitarium, 29 cases	$2,900 00	
Neal Institute, 8 cases	600 00	
L. H. Grundy, superintendent Relay Sanatorium	100 00	
Court costs	650 50	
		4,250 50
Balance to Surplus 1913		$49 50

4. PUBLIC WORKS

ADMINISTRATION A—VI (32).

CITY ENGINEER'S DEPARTMENT (32).

Salaries, appropriation	$43,880 00	
Returned salary	50 00	
		$43,930 00

EXPENDITURES.

City Engineer, H. K. McCay	$4,500 00	
Chief Chief and Paymaster, George M. Boeteler	1,793 75	
Bookkeeper, W. S. Taylor	1,179 96	
Permit Clerk, Joseph L. Fergusson	999 96	
Stenographer, Edward S. Brittain	900 00	
Clerk, J. Harry Griffith	370 06	
" T. A. Clisham	727 50	
Amounts carried forward	$10,471 23	$43,930 00

Amounts brought forward	$10,471 23	$43,930 00
Clerk, John V. Mahon	45 48	
" John J. Kelly	19 36	
" John Bollin	112 00	
" M. G. Siebold	231 74	
" E. F. Sullivan	208 32	
" David Ford	720 00	
" G. J. Barrett	90 00	
" Clarence Clements	158 00	
" E. S. Bohager	454 00	
" John McCabe	12 50	
" Thomas J. Morgan	516 07	
Assistant City Engineer, C. O. Vandevanter	2,700 00	
Engineer, Joseph Greenbaum	1,500 00	
" R. B. Bowie	62 50	
" P. A. Gibbons	1,487 50	
" H. E. Herrman	1,200 00	
" J. E. Behrman	1,200 00	
" Henry Wilson	1,100 00	
" Joseph U. Isaacs	1,800 00	
" James W. Ogier	1,712 50	
" Charles W. Whittle	1,200 00	
" William D. Hines	400 00	
" George E. Hilton	1,074 98	
Stenographer and Typewriter, K. F. Heine	720 00	
Engineer and Draughtsman, H. F. Siemers	1,200 00	
Chief Inspector, F. H. Beall	1,500 00	
Inspector, James C. G. Unduch	750 00	
Chief Footway Inspector, George H. Glantz	550 00	
" " " David D. Porter	650 00	
Footway Inspector, William S. Wood	900 00	
" " John E. Beahan	900 00	
" " Edward B. Callis	900 00	
" " D. D. Porter	262 50	
" " F. A. Ives	637 50	
City Forester, R. B. Maxwell	1,666 60	
Assistant City Forester, R. A. Martin	656 85	
		39,769 63
Balance to Surplus 1913		$4,160 37

LIVERY AND TRANSPORTATION (32).

Appropriation		$3,500 00

EXPENDITURES.

Car fares	$1,699 80	
Chauffeurs' salaries	525 00	
Repairs to automobiles	255 80	
Automobile storage, accessories, insurance, licenses	1,019 40	
		3,500 00

INCIDENTALS (32).

Appropriation		$1,000 00

EXPENDITURES.

Postage	$295 00	
Underwood typewriter	70 53	
Expenses, trips to New York, Pittsburgh, Buffalo and Norfolk	148 43	
Bonds of employes	75 00	
Subscriptions and dues	32 50	
Printing annual report	41 35	
Changing telephone system	51 37	
Miscellaneous supplies	285 35	
		999 53
Balance to Surplus 1913		$0 47

ADVERTISING (32).

Appropriation		$300 00

EXPENDITURES.

E. Raine, *German Correspondent*	$103 94	
Charles C. Fulton & Co., Baltimore *American* and *The Star*	139 46	
		243 40
Balance to Surplus 1913		$56 60

COMMISSIONERS FOR OPENING STREETS (32).

Salaries, appropriation		$9,900 00

EXPENDITURES.

Commissioner, Eugene E. Grannan	$1,800 00	
" John L. Sanford	775 00	
" Bushrod M. Watts	1,025 00	
" Harry A. Remley	635 00	
" Edmund Budnitz	1,125 00	
Secretary, Eugene F. Rodgers	1,500 00	
Real Estate Man, Samuel F. Sharretts	1,800 00	
Assistant Real Estate Man, Frank P. Kavanaugh	1,200 00	
		9,860 00
Balance to Surplus 1913		$40 00

Expenses, appropriation		$500 00

EXPENDITURES.

New typewriter, hire of typewriter and supplies	$211 51	
Postage stamps	85 00	
Miscellaneous—Newspapers, bookbinding, recording deeds	190 93	
		487 44
Balance to Surplus 1913		$12 56

SUPERINTENDENT OF LAMPS AND LIGHTING (32).

Salaries, appropriation		$16,788 00

EXPENDITURES.

Superintendent of Lamps and Lighting, Robert J. McCuen	$3,000 00	
Asst. Supt. of Lamps and Lighting, William Mohr	1,595 83	
Chief Inspector, James N. Baggett	1,595 83	
Clerk, George Hocheder	862 50	
Stenographer and Typewriter, Joseph J. Flynn	720 00	
Superintendent Eastern District, Benjamin T. Wells	876 21	
" Northeastern District, Harry White	876 21	
" Western District, Charles Dollinger	876 21	
" Northwestern District, James H. Carter	876 21	
" Northern No. 1 District, Adam Hensel	876 21	
" Northern No. 2 District, Harry C. Kennedy	876 21	
" Southern District, James A. Rodgers	876 21	
" Central District, Thomas H. Trott	876 21	
Inspector of Illuminating Oil, Frank F. Busch	810 67	
Mechanic, Charles Heinritz	912 00	
		16,506 51
Balance to Surplus 1913		$281 49

INCIDENTALS (32).

Appropriation		$350 00

EXPENDITURES.

Advertising	$78 59	
Postage	51 35	
Insurance on automobile	69 25	
Printing annual report	38 30	
Miscellaneous	112 51	
		350 00

COMMISSIONER OF STREET CLEANING (32).

Salaries, appropriation		$26,840 00

EXPENDITURES.

Commissioner of Street Cleaning, William A. Larkins	$3,000 00	
Gen. Supt. Street Cleaning Div., Michael F. Doonan	1,650 00	
Gen. Supt. Sanitary Div., Edward F. Callahan	1,650 00	
Chief Clerk and Paymaster, Frederick G. Whelan	1,500 00	
Assistant Clerk, William E. Anderson, Jr.	825 00	
Stenographer, C. B. Barakat	900 00	
Amounts carried forward	$9,525 00	$26,840 00

Amounts brought forward	$9,525 00	$26,840 00
Clerk, Samuel C. Mann	1,000 00	
Superintendent First District, William Wiebking	1,000 00	
“ Second District, John Hunt	1,000 00	
“ Third District, Richard Migan	125 01	
“ Third District, Robert P. Stewart	875 07	
“ Fourth District, Thomas V. O'Connell	1,000 00	
Acting Superintendent Fifth District, William Rowley	125 01	
Superintendent Fifth District, Richard Migan	83 34	
“ Fifth District, William Rowley	708 37	
“ Sixth District, John P. Murray	550 00	
“ Sixth District, John T. Wheltle	541 70	
“ Seventh District, James R. Caddin	250 01	
“ Seventh District, George B. Cooper	708 37	
“ Ninth District, Frank A. Osenasek	540 70	
“ Machine Sweeping, James Crouch	1,000 00	
“ Central District, John Holden	1,200 00	
“ Northern District, William P. Fannin	1,200 00	
“ Western District, John C. Dorsey	1,200 00	
“ Southern District, James P. Kane	1,200 00	
Chief Inspector, William McDermott	900 00	
Assistant Inspector, William Fabizak	600 00	
“ “ Frank Rochester	75 00	
“ “ S. C. Williams	276 56	
“ “ Henry Mueller	78 44	
Dump Inspector, P. B. Holden	720 00	
Assistant Dump Inspector, John T. O'Connor	66 79	
		26,549 37
Balance to Surplus 1913		$290 63

Incidentals, appropriation		$2,720 00

EXPENDITURES.

A. M. Webb, notary fees	$159 20	
J. H. Ferd. Hahn, banners and badges	270 00	
Expenses of Commissioner, Convention, Winnipeg	154 50	
Car fares	227 25	
Postage	45 00	
Premiums on bonds of employes	67 00	
Advertisements	102 77	
O. P. Steinwald, music for parade	90 00	
Miscellaneous	530 92	
		1,646 64
Balance to Surplus 1913		$1,073 36

HARBOR BOARD (32).

Salaries, appropriation		$6,130 00

EXPENDITURES.

Harbor Engineer, Oscar F. Lackey	$3,999 84	
Chief Clerk, James H. Irvin	1,650 00	
Messenger, Charles A. Grams	20 00	
		5,669 84
Balance to Surplus 1913		$460 16

Incidentals, appropriation		$500 00

EXPENDITURES.

Lunches and cigars for Harbor Board	$210 21	
Postage	42 16	
Printing annual report	46 10	
Trip, Harbor Engineer, to Norfolk	25 50	
Miscellaneous	71 20	
		395 17
Balance to Surplus 1913		$104 83

CITY SURVEYOR (32).

Transferred from Contingent Fund	$240 00
Rent	240 00

PAVING COMMISSION (32).

Administrative Salaries, appropriation		$11,180 00

EXPENDITURES.

Chairman and Consulting Engr., R. Keith Compton	$2,500 00	
Secretary, J. Myers Hedian	1,500 00	
Bookkeeper, John Thorne	138 43	
" W. I. Bowie	797 61	
Stenographer, Wm. F. Gies	30 00	
" Wm. F. Gies	747 50	
File Clerk, Ignatius E. McKenna	30 00	
" " Ignatius E. McKenna	525 00	
Clerk, Wm. Juerss	1,200 00	
" George Farandis	1,200 00	
" David Binswanger	600 00	
" B. M. Behrend	600 00	
" Wm. F. Wallace	800 00	
" Edward M. Grindell	400 00	
		11,068 54
Balance to Paving 1951 Loan		$111 46

Construction Salaries, appropriation		$52,600 00

EXPENDITURES.

Assistant Engineer, L. J. Houston, Jr	$308 33	
" " R. M. Cooksey	2,187 50	
" " F. K. Duncan	1,787 50	
" " C. P. Noland, Jr	1,662 50	
" " Wm. H. Smith	1,343 75	
" " H. D. Williar, Jr	1,343 75	
" " P. C. Painter	1,343 75	
Inspector and Asst. Engineer, Bernard L. Crozier	1,316 25	
" George P. Camalier	1,052 42	
" C. E. Bennett	380 32	
" Benjamin Grymes	1,035 00	
" P. Norton	713 61	
" J. C. Shryock	1,065 48	
" Pierce Marston	1,059 00	
" Lewis Macher	90 00	
" Irving Scott	900 00	
" A. C. Knight	869 95	
" John E. Ward	194 75	
" James E. Murphy	1,042 02	
" N. U. Hasson	1,072 50	
" W. C. O'Keefe	637 50	
" Francis J. Hayden	885 00	
" Evan V. Rinehart	127 50	
" Samuel Dinnis	1,027 50	
" Wm. A. O'Neill	792 00	
" Charles H. Kirby	642 18	
" Wm. E. Bowles	47 18	
" John J. Gallagher	819 92	
" Leroy P. Mayes	1,072 50	
" Robert A. Chambers	772 50	
" Wm. A. Hunt	662 18	
" Wm. T. Brewer	1,015 50	
" Joseph W. Thomas	1,072 50	
" John A. Murphy	1,052 17	
" T. Harry Magee	75 00	
" Robert H. Fisher	300 00	
" Henry Staylor	802 02	
" Ambrose M. White	532 50	
" Wm. Youse	434 68	
" James C. Parkinson	722 18	
" John W. Farrell	900 00	
" Wm. B. Waterman	1,072 50	
" Wm. King	1,080 00	
" James R. Carroll	669 68	
" Lawrence Cotter	37 74	
" Albert Whiteley	37 50	
" D. D. Porter	180 00	
" John Thorne	738 00	
" M. G. Harris	656 13	
" Thomas L. Hines, Jr	656 13	
Amounts carried forward	$40,288 57	$52,600 00

Amounts brought forward	$40,288 57	$52,600 00
Inspector, James H. McAfee	557 40	
" Edward B. Rebbert	466 66	
" John J. Collins	622 74	
" W. F. Perkins	555 00	
" E. G. Cox	90 00	
" and Draughtsman, C. D. Clark	349 98	
" " Rodman, A. J. Smith	865 00	
" " B. H. Hanson	685 00	
" " Thomas Davidson	887 50	
" " R. G. Hobbs	850 00	
" " H. C. Buckley	887 50	
Draughtsman and Inspector, George E. Finck	1,030 83	
Rodman, Alfred N. Satterfield	475 80	
" Wm. F. Gunkel	456 45	
" Ignatius E. McKenna	15 00	
Draughtsman, Charles Distefano	31 45	
" Edward J. McIntyre	41 13	
" Roland G. Spedden	313 71	
" Ernest M. Will	239 28	
" P. V. Burwell	249 98	
Stenographer, Clerk and Inspector, G. J. Barrett	233 31	
Sub-Inspector, J. B. Brinton	111 65	
" J. A. Schiavetti	134 00	
Stenographer and Clerk, Florence Solomon	546 66	
" " " George M. Dersch	100 00	
Chauffeur, John T. O'Mailey	747 50	
Chief Asphalt Inspector, Bruce Aldrich	83 37	
		51,915 47
Balance to Paving 1951 Loan		$684 53

Expenses, appropriation		$1,900 00

EXPENDITURES.

Postage	$100 34	
Printing and stationery supplies	257 99	
Office furniture	266 50	
Telephone rental and toll messages	62 21	
Expenses of inspection trips	59 00	
Miscellaneous	85 72	
		831 76
Balance to Paving 1951 Loan		$1,068 24

TESTING MATERIALS (32).

Appropriation		$10,000 00

EXPENDITURES.

Chief Asphalt Inspector, Bruce Aldrich	$1,908 30	
Brick Inspector, T. Harry Magee	675 00	
Test Inspector, Albert Whiteley	850 00	
Municipal Laboratory:		
Sheet asphalt and bituminous concrete inspected—		
261,904.4 square yards	2,556 50	
242,562 square yards	2,474 10	
Sampling and testing cement	1,506 64	
		9,970 54
Balance to Paving 1951 Loan		$29 46

OPENING, WIDENING AND GRADING STREETS A—VI (33).

STREETS OPENED, WIDENED AND CLOSED BY CONDEMNATION.

Streets.	Ordinances. No.	Ordinances. Year.	Jan. 1, 1913, Dr. Balance.	Jan. 1, 1913, Cr. Balance.	Receipts in 1913.	Appropriations in 1913.	Total Credits.	Expenditures in 1913.	Balance Dr.	Balance Cr.
Luzerne street	198	1912	$6 15					$216 64	$222 79	
Rose street	194	1912	5 89					164 72	170 61	
Ashland avenue	197	1912	5 89					171 56	177 45	
Belnord avenue	196	1912	5 89					224 23	230 12	
Lakewood avenue	195	1912	6 04					167 64	173 68	
Kenwood avenue	199	1912	6 00					242 13	248 13	
Jefferson street	193	1912	6 04					177 79	183 83	
Howard street	387	1909	45 10					67 84	112 94	
Twentieth street			23 18						23 18	
Potomac street			25 99						25 99	
Liberty Heights avenue	179	1912	6 27					1,375 87	1,382 14	
Waterfront street	682	1911	1,277 28					406 64	1,683 92	
Warwick avenue	187	1912	62 71					527 03	589 74	
Woodberry avenue	186	1912	55 39		$344 25		$344 25	448 76	159 90	
Centre and Front streets			87 24					126 83	214 07	
Green Spring Parkway	181	1912	168 12					1,594 65	1,762 77	
Riverside avenue	159	1912	412 89		1,716 75	$23,818 43	25,535 18	25,820 94	698 65	
Homestead street	335	19.9		$235 92	474 00		709 92	258 23		$451 69
Curley street	137	19.2	127 84		294 00		294 00	97 61		68 55
Spring Garden avenue	387	1909	65 84					32 90	98 74	
Calvert street	34	1911		72 80			72 80			72 80
Gwynn's Falls Parkway	678	1911	3,370 70					110 59	3,481 29	
Little Greene street	27	1911	849 03		2,871 50	31,825 59	34,697 09	33,875 90	27 84	
Frederick road	33	1911	315 90		2 00		2 00		313 90	
Glover street	16	1911	163 26		1,999 88	2,262 26	4,262 14	4,188 78	89 90	
Creamer alley	26	1911	355 01		417 50	18,571 20	18,988 70	17,961 30		672 39
Fortieth street	180	19.8		3,055 30	2,075 33		5,130 63	4,994 46		136 17
Belair road	679	1911	2,036 64					3,084 11	5,120 75	
Taylor street	698	1911	1,996 89					140 73	2,137 62	
Park Heights avenue	704	1911	385 10					96 07	481 17	
Wyman avenue	695	1911	1 75					9 00	10 75	
Beason street	93	1885		988 27			988 27			988 27
West Falls lane	87	1898	144 33						144 33	
Patapsco street	39	1883		715 14			715 14			715 14

Race street	139	1875		946 60			946 60			946 60
Abell street	70	1902	251 19						251 19	
Apple or Jew alley	99	1902	46 29						46 29	
Alley, opening, west side Garrett avenue	249	1905		33 47			33 47			33 47
Thirty-first street	256	1905	1,961 09			300 33	300 33		1,660 76	
Ostend and Stockholm streets	4	1905		163 28			163 28			163 28
Alley, Ensor and Hillen streets and Jew alley	228	1907	74 59						74 59	
Old Joppa road	231	1907	113 89						113 89	
Thirty-third street	251	1907		67,030 37	54,755 80		121,786 17	133,477 70	11,691 53	
Eleventh street	261	1907		23,860 98	5,215 35		29,076 33	31,243 97	2,167 64	
Sterrett alley	270	1907	638 98						638 98	
Montebello avenue	289	1907		1,246 56	2,330 50	22,059 08	25,636 14	22,839 25		2,796 89
Baker street	277	1907		727 69			727 69			727 69
The Alameda	227	1908	900 00						900 00	
Windsor Mill road	125	1908		100 72			100 72			100 72
Thirtieth street	117	1908		957 55	6,051 57	17,818 99	24,828 11	24,495 54		332 57
Kennedy avenue	195	1908		91 31			91 31			91 31
Twenty-second street	196	1908		909 51			909 51			909 51
Garrett avenue	197	1908	484 70						484 70	
Rose street	241	1909		61 03			61 03			61 03
Smallwood street	270	1909		723 99			723 99			723 99
Hudson alley	266	1909		98 90			98 90			98 90
Oak street	386	1909	539 00		2,931 60	3,811 41	6,743 01	6,006 16		197 85
Saratoga street	397	1909		4,733 14		752 86	5,486 00	5,486 00		
Slingluff avenue	357	1909	518 06					12 00	530 06	
Huntingdon avenue	271	1909		236 50			236 50			236 50
Keyworth avenue	418	1909		76 10			76 10			76 10
Courtney street	275	1909	246 23						246 23	
Baltimore street	272	1909	3,917 14						3,917 14	
Dukeland street	286	1909		3,424 42			3,424 42	14 00		3,410 42
Homestead street	336	1909	130 23					12 10	142 33	
Friendsbury Place				80 50			80 50			80 50
Twenty-fifth street	416	1909	2,464 77					299 00	2,763 77	
Twenty-sixth street	417	1909	360 76					13 20	373 96	
Thirty-fourth street	489	1910	799 79						799 79	
Cokesbury avenue	274	1907		591 55			591 55			591 55
Twenty-seventh street	536	1910		73 70			73 70			73 70
Windsor Mill road	534	1910	857 15					88 04	945 19	
Twenty-sixth street	537	1910		80 30			80 30			80 30
Pratt street	572	1910		5,516 57			5,516 57	12 60		5,503 97
Oak street	524	1910	237 72						237 72	
Baker street	535	1910	2,457 63		19,502 25	7,864 69	27,366 94	22,773 74		2,135 57
Merrymans lane	543	1910		81 70			81 70			81 70
Remington avenue	605	1910	365 75					250 00	615 75	
Dukeland street	624	1911	846 32		61 00		61 00	381 66	1,166 98	
Ashburton street	669	1911	1,313 05					134 97	1,448 02	

OPENING, WIDENING AND GRADING STREETS (Continued) A—VI (33).

STREETS OPENED, WIDENED AND CLOSED BY CONDEMNATION.

Streets.	Ordinances. No.	Ordinances. Year.	Jan. 1, 1913, Dr. Balance.	Jan. 1, 1913, Cr. Balance.	Receipts in 1913.	Appropriations in 1913.	Total Credits.	Expenditures in 1913.	Balance Dr.	Balance Cr.
Bonner road	681	1911	$681 92					$352 00	$1,033 92	
Thames street	689	1911	125 92		$269 33		$269 33			$143 41
Henrietta street	387	1909	86 32						86 32	
Longwood street	64	1912	392 32					570 09	962 41	
Belle avenue (Palatka street)	60	1911	334 47		496 17		496 17			161 70
McPhail street	65	1912	316 22		1,585 00		1,585 00	71 45		1,197 33
Fallsway	70	1912	4,434 70					40 73	4,475 43	
Barre street	387	1909	60 35					30 79	91 14	
Welcome alley	387	1909	43 13					30 79	73 92	
Conway street	387	1909	64 19					32 90	97 09	
Perry street	387	1909	63 44					32 69	96 13	
Wayne street	387	1909	64 86					33 29	98 15	
Hood street	95	1912	316 09		398 00		398 00	10 00		71 91
Adams street	109	1912	615 70					425 09	1,040 79	
Barlett avenue	119	1912	764 41		4,483 00	$7,808 79	12,291 79	13,484 80	1,957 42	
Twenty-eighth street	120	1912	326 22					379 98	706 20	
Hilton street	126	1912	125 86					139 15	265 01	
Hilton street	116	1912	148 48					40 00	188 48	
Patapsco street	387	1909	65 79					32 30	98 09	
York street	387	1909	65 25					32 30	97 55	
Front, Constitution and Centre streets	143	1912	112 85					126 00	238 85	
Thirty-seventh street	145	1912	474 21					1,130 00	1,604 21	
Montgomery street	387	1909						50 79	50 79	
Twenty-fourth street	216	1912						211 95	211 95	
Hillen street, widening	219	1912						373 86	373 86	
Penn. ave. and Reisterstown rd.	223	1913						1,487 90	1,487 90	
Spring Garden avenue	295	1913						221 50	221 50	
Ostend street	266	1913			1,250 00		1,250 00	277 37		972 63
The Alameda	335	1913						462 78	462 78	
Wyanoke avenue	310	1913						390 30	390 30	
Linwood avenue	284	1913						237 94	237 94	
Nursery alley	325	1913			1 00		1 00	185 40	184 40	
Brunswick street	342	1913						140 23	140 23	

Curley street	256	1913						156 15	156 15	
Courtland street	330	1913						1,000 94	1,000 94	
Glover street	262	1913						75 89	75 89	
Hamburg street								28 24	28 24	
Wicomico street								27 79	27 79	
Harford road								72 68	72 68	
Broadway, opening								28 58	28 58	
Luzerne street	301	1913						317 45	317 45	
Wolfe street	337	1913						352 66	352 66	
Covington street	373	1913						222 10	222 10	
Hillen and Stockholm streets						25,000 00	25,000 00	8,550 80		16,449 20
Key Highway	261	1913						1,840 07	1,840 07	
Monastery avenue	353	1913						171 82	171 82	
Mills road	365	1913						155 37	155 37	
Church street	282	1913						158 25	158 25	
Eager Place	263	1913			130 00		130 00	431 58	301 58	
Aisquith street	331	1913			175 00		175 00	843 13	668 13	
			$41,225 39	$116,913 87	$109,830 78	$161,893 63	$388,638 28	$379,590 75	$73,733 17	$41,555 31
Balance, December 31, 1912			75,688 48							
Excess in expenditures over receipts					269,759 97					
Debit balances, December 31, 1913										32,177 86
			$116,913 87	$116,913 87	$379,590 75	$161,893 63	$388,638 28	$379,590 75	$73,733 17	$73,733 17

UNCLAIMED DAMAGES FOR OPENING STREETS (33).

Balance brought forward from 1912	$505 17	
Received for account of sundry persons	50 60	
Interest on investment of fund, Funding 1916 Loan	30 00	
		$585 77
Paid out		1 00
Balance carried forward to 1914		$584 77

WIDENING HARFORD ROAD (33).

Balance brought forward from 1912	$16,540 61	
Reimbursement by transfer from Annex Imp. 1951 Loan	20,121 81	
		$36,662 42

EXPENDITURES.

Ellen O'Neill, leasehold, property No. 201 Harford road	$2,900 00	
Mayor and City Council, benefits assessed on lots 78, 79, 48	144 00	
F. Novak, net damages, No. 2201 Harford road	1,266 42	
Miscellaneous	2 00	
		4,312 42
Balance to Surplus 1913		$32,350 00

STREET PAVING A—VI (34).

PAVING MULBERRY, SARATOGA AND PULASKI STREETS (34).

Appropriation	$5,000 00
Expended	2,460 71
Balance to Surplus 1913	$2,539 29

IMPROVEMENT OF BAKER STREET (34).

Appropriation	$1,090 00
No expenditures—Balance carried forward to 1913	1,090 00

UNDERPINNING BUILDINGS, ETC., HOWARD, EUTAW AND HAMBURG STREETS (34).

Balance brought forward from 1912	$405 24
No expenditures—Balance carried forward to 1914	405 24

PAVING RIDGELY STREET (34).

Balance brought forward from 1912	$12,869 58
No expenditures—Balance to Surplus 1913	12,869 58

REGRADING, REPAVING AND CURBING MADISON STREET, FROM LUZERNE STREET TO GROVE ALLEY (34).

Appropriation	$2,593 97
Refunded Frank Novak, as per Ordinance No. 125 of 1912	2,557 91
Balance to Surplus 1913	$36 06

REGRADING, REPAVING AND UNDERPINNING WALLS ON HOWARD, STOCKHOLM, EUTAW AND NEIGHBORING STREETS (34).

Appropriation		$25,000 00

EXPENDITURES.

Labor, as per pay roll	$18,743 61	
Hauling	813 61	
Stone (256,172 yards)	609 30	
Cement	510 30	
Sand (488 yards)	503 32	
Gravel (343,943 yards)	367 86	
Road binder (3,347 gallons)	301 23	
Filler (2,504 gallons)	295 88	
New inlets and connections	346 05	
Excavating on Ostend street	911 67	
Miscellaneous supplies	312 44	
		23,715 27
Balance to Surplus 1913		$1,284 73

REGRADING, REPAVING AND CURBING GARRETT STREET, FROM PARK AVENUE TO HOWARD STREET (34).

Appropriation	$2,600 00
Refunded Baltimore Bargain House, as per Ordinance No. 133 of 1912,	2,500 00
Balance to Surplus 1913	$100 00

PAVING POTOMAC STREET (34).

Transferred from Contingent Fund	$300 00
Expended	300 00

ACQUIRING STREETS, LANES, ALLEYS, ETC., AND EXPENSES GENERALLY (34).

Appropriation	$420,516 71
Balance brought forward from 1912	124,393 69

RECEIPTS.

From property-owners, Lombard street	278 49
" " Carroll street	273 18
" " Massachusetts avenue	40 35
" " Thirty-first street	2,580 23
" " Harford road	3,973 80
" " Garrison avenue	3,354 30
	$555,410 75

EXPENDITURES.

(See following table.)

EXPENDITURES FOR ACQUIRING STREETS, LANES, ALLEYS, ETC.

Annex Improvement Commission Contract No.	Contractor.	Paid Contractor on Contract.	Paid Contractor for Extra Work.	Paid City Engr. for Work Incident to Contract.	Advertising.	Total.
1				$3,244 00		$3,244 00
7	Wm. M. Elder Pav. & Con. Co.	$12,023 76		2,988 75		15,012 51
8	F. E. Schneider Paving Co.	2,328 49	$45 75			2,374 24
10	F. E. Schneider Paving Co.			1,391 19		1,391 19
11	F. E. Schneider Paving Co.	7,530 60	123 89	2 56		7,657 05
12	P. Flanigan & Sons	3,533 69	420 00			3,953 69
13	P. Flanigan & Sons	16,155 08	207 80			16,362 88
14	Wm. M. Elder Pav. & Con. Co.	3,830 60				3,830 60
15	Wm. M. Elder Pav. & Con. Co.	23,972 20	565 11	359 62		24,897 13
106	P. Flanigan & Sons	19,168 97			$22 76	19,191 73
107	P. Flanigan & Sons	13,675 49	297 15	1,734 15	11 32	15,718 11
108					26 83	26 83
109					26 84	26 84
110	Eastern Paving Co.	14,575 78		82 59	26 83	14,685 20
111	Penn-Mar Construction Co.	14,348 72		227 93	26 83	14,603 48
112	J. H. Cranford Construction Co.	14,398 39		105 79	11 45	14,515 63
113	J. H. Cranford Construction Co.	13,389 86			11 44	13,410 30
114	J. H. Cranford Construction Co.	3,339 20			11 44	3,350 64
115	P. Flanigan & Sons	7,744 48		144 00	47 46	7,935 95
116	J. H. Cranford Construction Co.	1,200 00			11 46	1,211 46
117					11 45	11 45
118	Firch & Allen	15,754 24	2,787 75	86 33	24 64	18,652 96
119	Thomas Mullan	7,809 19	202 31	93 72	22 82	8,128 04
120					48 91	48 91
121	Baltimore Asphalt and Tile Co.	19,654 20		1,140 41	44 72	20,839 33
122					41 81	41 81
123	Baltimore Asphalt and Tile Co.	11,013 00			47 25	11,060 25
124	Baltimore Asphalt and Tile Co.	12,712 80		11 52	76 87	12,801 19
125	Warner-Quinlan Asphalt Co.	15,284 16		1,708 12	27 56	17,019 84
126	American Paving and Con. Co.	19,665 20	1,266 50		58 23	20,989 93
127					49 30	49 30
128					50 42	50 42
Parking Thirty-second and Thirty-third sts.	C. M. Morfit	403 11		90 31		493 42
Grading Moses alley	M. Holbrook	493 50		534 63		1,028 13
Parking Belle avenue	C. M. Morfit	645 97		339 90		985 87
Grading Beech avenue	M. Holbrook	338 40				338 40
Thirty-first street, opening, from Huntingdon ave. to Remington ave.						5,681 94
Garrison, Berwyn, and Liberty Heights avenues, opening, from Clifton avenue to western city limits (damages and benefits)						9,461 24

Harford road, widening, from North avenue to eastern city limits					40,034 52
Salaries of employes, charged to expenses					2,969 92
Examination of titles					902 55
Expense account of employes, car fare and out-of-town expenses					395 07
Engineering instruments and supplies					951 07
Automobile purchase and repairs					836 80
" hire					214 00
Test of materials by City Engineer and Sewerage Commission					1,491 67
Purchase of land at Clifton avenue and Denison street					807 19
Miscellaneous advertising				39 60	39 60
" grade establishments					441 28
" taxes and benefits					360 72
" expenses					1,256 58
Wrecking house on Hilton street					120 70
Allendale street, parking					513 29
	$274,998 08	$5,916 26	$14,285 53	$778 24	$362,416 85

Amount of appropriation and receipts	$555,410 75
Expenditures	362,416 85
Balance carried forward to 1914	$192,993 90

ANNEX IMPROVEMENT COMMISSION (34).

Salaries, appropriation	$19,820 00	
Refund	3 58	
		$19,823 58

EXPENDITURES.

Commissioner, Eugene E. Grannan	$699 98	
" John L. Sanford	301 42	
" Bushrod M. Watts	398 56	
" Harry A. Remley	253 92	
" Edmund Budnitz	437 45	
Secretary, Eugene F. Rodgers	499 92	
Real Estate Man, Samuel F. Sharretts	287 50	
Assistant Real Estate Man, Frank P. Kavanaugh	191 59	
Chief Engineer, Frank W. McKinney	1,245 62	
" " H. K. Faust	1,249 94	
Assistant Engineer, J. Kilby McGrath	109 17	
Chief Draughtsman, Jeff. C. Grinnalds	1,237 50	
Assistant Draughtsman, George W. Kelly	805 00	
Instrument Man, J. Morris McCummings	1,150 00	
" " J. W. McKay	425 00	
Rodman, Harry R. Glance	747 50	
" William J. Booth	747 50	
" Joseph Hogan	325 00	
" E. T. Mudge	162 50	
" Martin W. Krepp	162 50	
Inspector, Richard Pendergast	1,005 00	
" John S. Ward	411 00	
" Whiteford Reed	450 00	
" John F. Smith	133 01	
" Michael Fallon	540 00	
" James F. Draper	321 00	
" John Silk	1,035 00	
" Lawrence B. McCabe, Jr.	945 00	
" Louis Langrehr	1,005 00	
" Frank D. Foley	990 00	
" Thomas S. Hope	516 00	
" John Brannan	1,035 00	
		19,823 58

FOOTWAY CROSSINGS (34).

Appropriation		$1,000 00

EXPENDITURES.

Labor, as per pay rolls	$392 09	
Hauling and sand	61 75	
Laying concrete f'tway on Harford rd., Montebello property	170 28	
		624 12
Balance to Surplus 1913		$375 88

PAVING AND REPAIRING CROSS STREETS AND PAVING IN FRONT OF CITY PROPERTY (34).

Appropriation	$45,000 00	
Refund	10	
		$45,000 10

EXPENDITURES.

Labor, as per pay rolls	$21,499 07	
Bituminous concrete on Charles street	9,198 94	
Cement footways laid by contract	4,965 62	
Asphalt blocks (4x5, 21,200; 3x5, 18,550)	2,603 35	
Crushed stone (644,063 cu. yds.)	1,422 47	
Barrett filler (120,445 lbs.)	846 62	
Paving sand (857.46 cu. yds.)	826 22	
Hauling	603 33	
Stone crushing	541 21	
Concrete protection to members of Calvert St. Bridge	465 95	
Lumber (800 lin. ft. Virginia pine)	370 54	
Sheet asphalt repairs	354 38	
Vitrified blocks (9,825)	206 65	
Belgian blocks (5,000)	194 04	
Freight	108 40	
Miscellaneous supplies	636 33	
		44,843 12
Balance to Surplus 1913		$156 98

PAVING, REPAVING AND RESURFACING ROADS AND STREETS (34).

Appropriation	$307,050 00	
Receipts	4,126 25	
Transferred from—		
City Engineer's Emergency Fund	3,000 00	
Impts. in and Addition to Drainage System	5,000 00	
		$319,176 25

EXPENDITURES.

Labor, as per pay rolls	$131,429 18	
Asphalt blocks (4x5, 412,926; 3x5, 143,275; old, 1,755).	38,329 10	
Belgian blocks (176,563)	7,761 15	
Vitrified blocks (132,701)	2,714 43	
Crushed stone, dust and granolithic, Gabbro (5,334.60 cu. yds.)	11,387 83	
Cement	2,570 84	
Paving sand (7,605 cu. yds.)	7,222 00	
Screened sand (596.64 cu. yds.)	857 58	
Gravel (1,523.26 cu. yds.)	1,988 03	
Hauling	8,018 69	
Sheet asphalt repairs	40,316 97	
Stone crushing	10,509 06	
Lumber	3,543 83	
Repairs to improved pavement under guarantee	734 68	
Pipe	100 82	
Car fare	1,089 05	
Automobile supplies and storage	788 33	
Freight, express and demurrage charges	3,874 64	
Tools and hardware	1,302 11	
Barrett filler (461,170 lbs.)	3,226 00	
Coal oil and gasoline	581 00	
Coal and wood	448 13	
Bituminous concrete laid	17,659 08	
Curb iron bars (2,000 ft.)	308 88	
Old material from Paving Commission	1,556 43	
Paving blocks (8,455)	101 46	
Paints, oils and brushes	402 27	
Repairs to rattler motor (City Yard)	355 30	
Repairs to engine, concrete mixer	292 81	
Inspection sheet asphalt and bituminous concrete	1,361 72	
Concrete base laid, Cathedral st. (233.7 sq. yds.)	394 08	
White oak keys (84,907)	3,935 29	
Rebate for grading Grantley street	390 66	
Transit	156 80	
Cobble stone (154 loads)	154 00	
Surveys and plats	214 00	
Motor cycles and accessories	596 62	
Inspection of improved pavements under guarantee.	1,227 00	
Inspecton of granite blocks	122 55	
Paving Pratt street	7,775 45	
Equipping mixer with batteries	364 65	
Hire of road roller	581 90	
Wire mesh	132 54	
Miscellaneous expenses and supplies	2,229 33	
		319,106 27
Balance to Surplus 1913		$69 98

GRADE ESTABLISHMENTS (34).

(City Engineer's Department.)

Appropriation	$5,000 00	
Received from applicants for grade establishments	1,783 02	
		$6,783 02

EXPENDITURES.

City Surveyor	$4,027 00	
Advertising	658 93	
Rebate on bills rendered	57 86	
Labor, as per pay rolls	632 00	
Grade book and stationery	99 00	
		5,474 79
Balance to Surplus 1913		$1,308 23

PAVING PRIVATE ALLEYS (34).

Appropriation	$3,000 00	
Brought forward from 1912	2,000 00	
Receipts	3,738 37	
		$8,738 37

EXPENDITURES.

Labor, as per pay rolls	$2,644 42	
Refunds	452 26	
Vitrified block (52,000)	1,024 43	
Paving sand (272½ cu. yds.)	269 70	
Gravel (126.4 cu. yds.)	181 74	
Cement	248 02	
Hauling	111 38	
Advertising	165 01	
Pipe (588 ft.)	155 88	
Miscellaneous supplies	150 16	
		5,403 00
Balance carried forward to 1914		$3,335 37

LAYING DUST AND PRESERVING MACADAM ROADS (34).

Appropriation		$12,000 00

EXPENDITURES.

Labor, as per pay rolls	$4,860 81	
Crushed stone and granolithic (603,882 cu. yds.)	1,429 60	
Texaco oil (12,027 gals.)	902 03	
Paving sand (12,525 cu. yds.)	1,287 03	
Aztec liquid asphalt (30,785 gals.)	1,231 40	
Fairfield (6,000 gals.)	435 00	
Trinidad liquid asphalt "A" (8,030 gals.)	449 68	
Motor cycle	265 00	
Kent oil heater	125 00	
Tarco heating kettles (2)	200 00	
Van Duzen mixer	175 00	
Miscellaneous	432 84	
		11,793 39
Balance to Surplus 1913		$206 61

PRIVATE PAVING AND INSPECTION (34).

Debit balance brought forward from 1912	$51,768 86	
Expenditures	259,993 69	
		$311,762 55
Receipts		247,025 87
Debit balance carried forward to 1914		$64,736 68

PAVING PRIVATE FOOTWAYS (34).

Expenditures for work done and charged to property-owners	$11,586 72
Receipts through City Collector from property-owners	3,476 18
Debit balance charged to Surplus 1913	$8,110 54

EMERGENCY FUND (34).

Appropriation	$10,000 00	
Receipts (to offset error)	1,489 62	
		$11,489 62

EXPENDITURES.

Paid to offset error (see receipts)	$1,489 62	
Transferred to—		
Maintenance of Bridges and Culverts	7,000 00	
Paving, Repaving and Resurfacing Roads and Sts.	3,000 00	
		11,489 62

REVENUE (34).

Sale of old material	$9,663 57
Refund	154 00
Paid into city treasury	$9,509 57

IMPROVED PAVING (34).

(Paving Commission.)

Appropriation	$924,320 00	
Brought forward from 1912	830,133 60	
Special paving tax (collected by City Collector)	62,317 76	
Received from railway companies for paving railway areas, etc	31,873 14	
Received from Baltimore city departments for hauling, piling blocks, concreting, blocks and old material returned	1,949 74	
Received from various concerns for grading, paving, removing dirt, repairing pavement and hauling curb	1,285 58	
Pay Voucher No. 13,438, Nov. 11, 1912, cancelled (refused)	4,356 43	
Testing block for various concerns	584 50	
Sale of blue prints, old material, forfeit and refund.	378 07	
Received from City Engineer's Dept. for wire mesh, reinforcing with sheet asphalt Contract No. 20.	2,843 02	
		$1,860,041 84

EXPENDITURES.

Payments on Contracts Nos.:		
4. F. E. Schneider Paving Co	$400 00	
6. Elder Paving and Contracting Co	30,509 81	
7. P. Flanigan & Sons	30,103 65	
8. Filbert Paving and Construction Co	64,399 27	
10. D. M. Andrews & Co	11,992 42	
11. N. A. Middleton & Co	500 00	
12. N. A. Middleton & Co	6,309 14	
14. Warner-Quinlan Asphalt Co	49,369 70	
15. Warner-Quinlan Asphalt Co	24,479 10	
16. Warner-Quinlan Asphalt Co	79,704 01	
17. Cunningham Paving and Construction Co	28,389 67	
20. Filbert Paving and Construction Co	16,935 41	
24. P. F. Reddington	7,016 18	
26. Martin J. Beach	70,591 26	
27. John E. Quinn	37,960 72	
29. Cunningham Paving and Construction Co	7,152 80	
30. P. F. Reddington	1,002 43	
31. F. E. Schneider Paving Co	20,106 08	
32. United States Asphalt Refining Co	41,801 61	
33. Consolidated Engineering Co	13,905 97	
34. Cunningham Paving and Construction Co	37,455 98	
35. P. F. Reddington	17,202 12	
36. Cunningham Paving and Construction Co	13,697 16	
37. Elder Paving and Contracting Co	12,961 94	
38. George Long Contracting Co	34,666 12	
39. George Long Contracting Co	14,958 82	
40. Standard Contracting Co	27,194 02	
41. Filbert Paving and Construction Co	15,204 61	
42. P. F. Reddington	31,603 47	
43. Martin J. Beach	33,000 40	
44. F. E. Schneider Paving Co	75,200 76	
45. P. Flanigan & Sons	18,370 68	
46. P. F. Reddington	14,215 55	
47. Field. Barker & Underwood	22,469 80	
48. George Long Contracting Co	19,150 36	
49. P. Flanigan & Sons	17,209 75	
50. P. Flanigan & Sons	59,296 26	
51. F. E. Schneider Paving Co	44,882 01	
52. Thomas Mullan	18,767 88	
53. P. F. Reddington	40,166 80	
54. Eastern Paving Co	17,226 42	
55. P. F. Reddington	14,374 36	
56. Eastern Paving Co	6,649 52	
57. Martin J. Beach	28,252 98	
58. Standard Contracting Co	14,434 64	
59. Standard Contracting Co	13,451 25	
60. John E. Quinn	26,541 07	
61. Southern Paving Construction Co	....	
62. Baltimore Asphalt Block and Tile Co	55,661 11	
63. Filbert Paving and Construction Co	42,812 37	
64. Baltimore Asphalt Block and Tile Co	4,166 08	
65. Southern Paving Construction Co	15,949 20	
66. Patrick F. Reddington	....	
Amounts carried forward	$1,349,822 72	$1,860,041 84

Amounts brought forward		$1,349,822 72	$1,860,041 84
67. Southern Paving Construction Co.		16,051 20	
68. John E. Quinn		2,072 00	
69. George Long Contracting Co.		4,269 51	
70. Southern Paving Construction Co.		2,378 40	
71. Baltimore Asphalt Block and Tile Co.		15,081 51	
Work done by City Engineer's day labor force:			
Group "A"—			
Mason alley, Lafayette ave. to Mosher st.		1,021 12	
Group "B"—			
Hollingsworth st., Lombard st. to Pratt st.		3,930 69	
Grant st., Pratt st. to Water st.		4,436 91	
Ellicott st., Pratt st. to Lombard st.		3,543 56	
Total payments on contracts		$1,402,607 62	
Salaries of per diem inspectors:			
P. V. Burwell, 21 days at $3	$63 00		
E. G. Cox, 83 days at $3.50	290 50		
Guy Stollenwerck, 103 days at $2.50	257 50		
Lee E. Hedrick, 189 days at $3.50	661 50		
A. M. White, 65 days at $3.50	227 50		
Wm. Youse, 53 days at $3	159 00		
W. P. Tippett, 151 days at $3.50	528 50		
A. L. Campbell, 132 days at $2.50	330 00		
Samuel D. Pitt, 143 days at $3.50	500 50		
J. D. Sears, 86 days at $2.50	215 00		
		3,233 00	
Advertising:			
E. Raine (German Correspondent)	$571 79		
C. C. Fulton & Co. (The Balto. American)	817 28		
A. S. Abell Co. (The Sun)	89 13		
Baltimore Star	39 00		
Baltimore Journal Publishing Co.	25 00		
Baltimore News	45 00		
Engineering Record	178 00		
Engineering News	229 10		
Municipal Journal	39 50		
Engineering and Contracting Co.	12 90		
		2,046 70	
Printing specifications	$211 81		
" stationery and supplies	610 47		
" annual report	129 50		
Car fare (Engineer's office)	881 85		
Blue prints	60 41		
Additional service	155 50		
Postage	69 55		
Burroughs adding machine	319 25		
Underwood typewriter	83 03		
		2,521 37	
Freight, drayage, toll, cubes, testing, overtime for inspectors	$82 78		
Thermometers and repairs	139 80		
Photos and maps	170 02		
Engineers' supplies, furniture and drawing material	583 28		
Bonding employes	32 50		
Hardware and wire baskets	394 17		
		1,402 55	
Motor, current and accessories at City Yard	$638 54		
Rent of lot for storing cobble	75 00		
Dow & Smith, inspection expenses	830 15		
Traveling expenses and meals	201 28		
Stenographic services, hearing in re Houston-Padgett mortgage, April 30, 1913	103 50		
Studebaker sprinkler	325 95		
Operating sprinkler on streets	500 00		
Paving around lamp poles and transferring for Con. Gas. E. L. & P. Co.	24 93		
Excavating in railway area, U. R. & E. Co.	481 34		
		3,180 69	
Cutting granite blocks	$380 92		
Hauling blocks	11 25		
Changing hydrants and manholes (Fire Department)	343 11		
Amounts carried forward	$735 28	$1,414,991 93	$1,860,041 84

Amounts brought forward	$735 28	$1,414,991 93	$1,860,041 84
Adjusting manholes and inlets (Sewerage Commission)	2,140 43		
Adjusting manholes and inlets (Electrical Commission)	1,012 51		
		3,888 22	
Cadillac touring car:			
License for 1913	$20 00		
Fire and liability insurance	114 00		
Supplies	492 74		
Gasoline and oil	230 14		
Storage	203 60		
Repairs	123 42		
Hiring car	18 00		
		1,201 90	
Ford runabout:			
License for 1913	$19 50		
Fire and liability insurance	43 50		
Supplies	127 33		
Gasoline and oil	80 99		
Storage	148 35		
Repairs	139 28		
		558 95	
Extra work account contracts		15,142 19	
City Engineer's Department:			
Inspection, curbing and repairs	$640 33		
Paving footways, cleaning streets and piling blocks	1,247 12		
Paving Old Ensor street	314 02		
Parking Bond street	6,705 41		
Adjusting manholes and inlets	9,177 41		
		18.084 29	
			1,453,867 48
Balance carried forward to 1914			$406,174 36

STREET CLEANING AND COLLECTION OF ASHES AND GARBAGE A—VI (35).

STREET CARTS AND MEN (35).

Appropriation	$140,400 00	
Transferred from Cleaning Sewers and Inlets, Sweeping Machines and Sprinklers, and Collection of Ashes and Garbage	6,771 20	
		$147,171 20
EXPENDITURES.		
Salaries	$129,083 20	
Transferred to Removal of Waste	5,000 00	
		134,083 20
Balance to Surplus 1913		$13,088 00

SWEEPERS AND SCRAPERS (35).

Appropriation	$212,628 00	
Transferred from Cleaning Sewers and Inlets and Sweeping Machines and Sprinklers	2,786 41	
		$215,414 41
EXPENDITURES.		
Salaries		188,672 04
Balance to Surplus 1913		$26,742 37

COLLECTION OF ASHES AND GARBAGE (35).

Appropriation		$227,483 22
EXPENDITURES.		
Transferred to Street Carts and Men	$212 50	
Pay rolls	150,029 88	
William Hopps Grain and Hay Company, hay and feed	27,596 66	
F. Megenhardt, hay and feed	9,251 32	
R. W. Norris & Sons, supplies	1,881 73	
Amounts carried forward	$188,972 09	$227,483 22

Amounts brought forward	$188,972 09	$227,483 22
Arundel Sand and Gravel Company, removal of waste	2,894 09	
George S. McLaughlin, shoeing	1,300 00	
James E. Gibson, shoeing	316 66	
M. J. McDermott, shoeing	1,102 50	
R. Burgess, shoeing	1,141 50	
H. F. Lindeman, drugs	319 80	
George Horisberg, harness	140 05	
Henry Bach, repairs	116 85	
Superintendent, small bills, shoeing	191 05	
Consolidated Gas Electric Light Company, current	244 78	
Piet-Robertson-Rainey Company, supplies	1,239 45	
F. H. Lohmeyer, agent, dump rent	160 00	
Francis T. Lynch, carts and repairs	4,611 40	
Maryland Sale and Commission Barn, horses	5,130 00	
Bolton Brothers, oils	178 81	
Lerch Brothers, harness	304 65	
United States Tire Company, new tires	334 26	
Kelly Springfield Tire Company, tires	105 00	
American Ice Company, horses	1,660 00	
Harbor Board, repairs to pier	1,068 00	
William J. Murphy, collars	615 44	
International Motor Company, garbage truck	5,043 00	
International Motor Company, repairs	136 67	
Western Maryland Railroad Company, rent	300 00	
Edward Stinson Manufacturing Company, wheels	212 41	
Stone, Dorsey & Co., insurance on truck	206 85	
E. J. Diggs, rent	1,437 50	
Winans Company, rent	100 00	
E. Scott Payne Company, supplies	910 94	
George P. Thomas, hose	255 54	
Miscellaneous supplies	365 48	
		221,114 77
Balance to Surplus 1913		$6,368 45

SWEEPING MACHINES AND SPRINKLERS (35).

Appropriation		$63,634 00

EXPENDITURES.

Transferred to Sweepers and Scrapers, and Street Carts and Men	$7,762 75	
Pay rolls	15,632 55	
F. Beck & Co., brooms	8,908 75	
Francis T. Lynch, machines	2,125 00	
F. Megenhardt, hay and feed	5,127 63	
William Hopps Grain and Hay Company, hay and feed	5,164 17	
George Ellenberger, repairs	826 85	
James King, livery	2,674 00	
Standard Motor Company, repairs to automobile	136 55	
Maryland Wagon Works, repairs	155 60	
Kennedy's Foundry, castings	161 22	
Kindling Machinery Company, machine and repairs	4,051 04	
Consolidated Gas and Electric Company, current	660 10	
John H. Short & Sons, lumber	277 48	
E. A. and B. M. Watts, coal	166 00	
Piet-Robertson-Rainey Company, supplies	397 33	
James J. Lacey, castings	194 40	
E. Scott Payne Company, supplies	534 06	
E. J. Diggs, rent	112 50	
National Enameling and Stamping Company, cans	275 00	
R. W. Norris & Sons, iron, steel, etc	1,437 05	
Maryland Sale and Commission Barn, horses	2,545 00	
Bolton Brothers, oils, etc	413 08	
R. Burgess, shoeing	118 00	
Miscellaneous supplies	766 72	
		60,622 83
Balance to Surplus 1913		$3,011 17

TOOLS AND REPAIRS (35).

Appropriation		$8,085 00

EXPENDITURES.

F. Beck & Co., brooms	$4,282 75	
R. W. Norris & Sons, supplies	351 35	
J. L. Kolscher, oils	131 37	
Bolton Brothers, supplies	255 68	
Laura Magness, trustee, rent	240 00	
Miscellaneous tools and repairs	1,229 25	
		6,490 40
Balance to Surplus 1913		$1,594 60

REMOVAL AND DISPOSAL OF WASTE (35).

Appropriation	$25,000 00	
Transferred from Street Carts and Men	5,000 00	
		$30,000 00

EXPENDITURES.

Paid contractor, Arundel Sand and Gravel Company		29,927 44
Balance to Surplus 1913		$72 56

REMOVAL OF GARBAGE (35).

Appropriation		$66,500 00

EXPENDITURES.

Southern Products Company, contractor	$66,000 00	
Spring Garden Wharf and Land Company, wharf rent	500 00	
		66,500 00

EMERGENCY FUND (35).

Appropriation	$10,000 00
No expenditures—Balance to Surplus 1913	10,000 00

DESTRUCTION OF WEEDS AND GRASS (35).

Appropriation		$2,000 00

EXPENDITURES.

Supplies	$425 00	
Labor pay rolls	509 00	
		934 00
Balance to Surplus 1913		$1,066 00

REVENUE (35).

Received from sale of horses, junk and refuse	$6,398 97
Paid into city treasury	6,398 97

STREET LIGHTING A—VI (36).

GAS LIGHTING AND MAINTENANCE (36).

Appropriation		$179,742 60

EXPENDITURES.

Maintenance and operation of street mantle gas lamps, including rental of burners, mantles, fixtures, repairs and lamplighters' salaries (contract)	$87,603 61	
Supply of gas to street mantle gas lamps (contract)	67,502 89	
" " " " bridge mantle gas lamps (contract)	2,150 84	
" " " " market halls (contract)	41 34	
Excess gas, ornamental lamps on North avenue, Charles street, public squares, etc., over regular monthly consumption of three cubic feet	1,557 99	
Connecting gas service from main to lamp post	4,544 36	
" " " " " " curb	3,112 28	
Amounts carried forward	$166,513 31	$179,742 60

Amounts brought forward	$166,513 31	$179,742 60
Changing position gas lamps	1,192 54	
Transferring gas lamps	1,470 18	
Ornamental lamp posts—Baltimore design	1,165 97	
Plain iron lamp posts	3,562 65	
Livery—Four horses and vehicle	1,175 00	
Studebaker automobile (25 horsepower) and freight	907 00	
Storage, repairs and hiring automobile	184 81	
Ruby glass street signs	371 51	
Lettering street names on lamp globes	183 40	
Cutting off gas service pipes from unused posts	474 63	
Extra labor and salaries	1,203 88	
Miscellaneous supplies	1,009 87	
		179,414 75
Balance to Surplus 1913		$327 85

ELECTRIC LIGHTING AND MAINTENANCE (36).

Appropriation	$257,340 81	
Transferred from Contingent Fund (Board of Estimates)	444 60	
Received for material and labor	346 86	
		$258,132 27

EXPENDITURES.

Operating arc lamps, all night serv., overh'd dis. (con.)	$93,179 76	
" " " " " " underg'd dis. (con.)	54,939 85	
" " " half-night serv., underg'd dis. (con.)	5,702 20	
" "White Way" all night lum. arc lamps (con.)	20,753 22	
" " " half-night lum. arc lamps (con.)	12,477 28	
Operating 24 marginal arc lamps, adjacent to parks and squares (contract)	1,557 76	
Operating 40 c. p. incandescent electric lamps in streets and alleys	16,641 60	
Electric current for incandescent lamps in markets and on bridges, meter measurement	6,714 16	
Electric current for incandescent lamps, Charles Street Boulevard, University Parkway and Thirty-ninth street, meter measurement	1,401 92	
Electric current for No. 6 Engine House clock	116 94	
Luminous "White Way" arc lamps	2,028 69	
Holders and cut-outs for lamps	106 41	
Tungsten and carbon lamps	561 36	
Time switches	261 00	
Repairing "White Way" arc lamp connections	1,331 28	
Connecting new arc lamps	803 66	
Transferring arc lamps	3,620 45	
Balance due Gas Co. for installing "White Way" lamps	21,960 26	
Subway connections for Charles St. Boul. and Univ. P'kway	1,306 22	
Special illumination for National Democratic Convention	8,677 98	
" " " Eagles' and Ad. Men's conventions	1,586 93	
" " " Colored K. of P. Convention	462 80	
"Alba" lamp globes	230 46	
Extra labor and salaries	323 63	
Miscellaneous	1,364 89	
		258,110 72
Balance to Surplus 1913		$21 55

NAPHTHA LAMPS AND MAINTENANCE (36).

Appropriation	$9,312 00
Expended, as per contract	8,088 23
Balance to Surplus 1913	$1,223 77

"WHITE WAY" ILLUMINATION (36).

Receipts	$1,497 40
George A. Miller, commission	224 61
Paid into city treasury	$1,272 79

REVENUE (36).

Sale of old material	$44 32	
Recovered damages	35 74	
		$80 06
Paid into city treasury		80 06

SEWERS AND SEWERAGE DISPOSAL A—VI (37).

CLEANING SEWERS AND INLETS (37).

Appropriation		$37,368 00
EXPENDITURES.		
Trans. to Street Carts and Men, and Sweepers and Scrapers	$1,582 36	
Pay rolls	25,424 39	
Maryland Sale and Commission Barn, horses	3,410 00	
R. W. Norris & Sons, tools	1,373 71	
George P. Thomas, Jr., hose	767 80	
George Ellenberger, repairs	339 20	
Landis Machine Company, machine	225 25	
Murrill, Keizer Company, castings	105 11	
Edward Stinson Manufacturing Company, supplies	455 25	
Wansch & Dobos, cans	412 50	
Dufur, Baggott & Co., wire cages	430 00	
Henry Bach, repairs to cans	116 20	
Miscellaneous supplies	529 79	
		35,171 56
Balance to Surplus 1913		$2,196 44

IMPROVEMENTS IN AND ADDITIONS TO DRAINAGE SYSTEM (37).

Appropriation	$24,000 00	
Credit for returned cement bags	449 06	
		$24,449 06
EXPENDITURES.		
Transferred to Paving, Repaving and Resurfacing Roads, Streets, etc.	$5,000 00	
Labor, as per pay rolls	$13,864 12	
Sand and gravel	151 96	
Crushed stone	130 89	
Inlet and manhole castings	1,656 43	
Tools and hardware	274 76	
Cement	451 73	
Brick	751 00	
Curb and reinforcing iron	116 60	
Drain pipe	1,000 10	
Lumber	371 34	
Rubber boots, coats	123 47	
Two and one-half inch washout hose	180 00	
Miscellaneous supplies	289 33	
		24,361 73
Balance to Surplus 1913		$87 33

REPAIRS TO SEWERS (37).

Appropriation	$15,000 00	
Wages returned	2 50	
Credit for returned cement bags	90 06	
		$15,092 56
EXPENDITURES.		
Labor, as per pay rolls	$11,279 88	
Sand and gravel	90 18	
Inlet and manhole castings	287 70	
Tools and hardware	119 23	
Machinery purchased	488 50	
Hauling	135 40	
Cement	328 48	
Brick	554 22	
Drain pipe	125 83	
Lumber	364 86	
Steel filing case	138 95	
Office supplies	116 60	
Adjusting water mains	259 23	
Miscellaneous supplies	324 94	
		14,614 00
Balance to Surplus 1913		$478 56

NEW SEWERAGE SYSTEM CONNECTIONS (37).

Balance brought forward from 1912	$63,119 75
Returned payment	19 64
	$63,139 39

EXPENDITURES.

Salaries	$974 61
Miscellaneous	27 94
Advanced by the city for sewerage connections	236,009 46
	$237,012 01
Debit balance carried forward to 1914	$173,872 62

SEWERAGE COMMISSION (37).

Administrative Salaries, appropriation		$27,780 00

EXPENDITURES.

Chairman, Charles England	$3,000 00	
Commissioner, Wm. D. Platt	1,500 00	
" Morris Whitridge	1,500 00	
" Ira Remsen	1,500 00	
" Wm. B. Kines	1,500 00	
" Gustav Siegmund	1,500 00	
Chief Engineer, Calvin W. Hendrick	9,999 96	
Secretary, Harry W. Rodgers	2,499 96	
Asst. Secretary, Philip F. McGreevy	1,595 77	
Stenographer, Mary E. Jennison	422 50	
" Agnes G. Brown	357 50	
Clerk-Stenographer, Wm. E. Baker	720 00	
Clerk, J. E. Derenberger	185 00	
" John Blair	415 00	
Telephone Operator, Bertie E. Mitchell	597 50	
Messenger, Kenneth M. Burns	200 00	
" Calvin Nicholson	280 00	
		27,773 19
Balance to New Sewerage 1961 Loan		$6 81

CONSTRUCTION FORCE SALARIES (37).

Appropriation	$273,640 00	
Refund	75 00	
		$273,715 00

EXPENDITURES.

First Asst. Engineer, Thomas D. Pitts	$4,287 46	
Secretary to Chief Engineer, J. J. Frederick	1,800 00	
Division Engineer, O. W. Connet	3,887 50	
" " A. H. Hartman	3,887 50	
" " H. C. McRae	3,600 00	
Office Engineer, W. A. Megraw	2,675 00	
Asst. Division Engineer, J. F. Apsey	815 73	
" " " R. L. Burwell	2,100 00	
" " " M. J. Ruark	2,087 00	
" " " E. H. Burwell	1,987 50	
" " " G. J. Requardt	1,687 50	
" Engineer "AA," A. C. Toner	1,800 00	
" " " C. K. Allen	975 00	
" " " H. T. Shryock	1,800 00	
" " " F. W. McKinney	900 00	
" " " F. H. Firoved	1,787 50	
" " " H. S. Register, Jr.	1,650 00	
" " "A," F. J. Parran	1,500 00	
" " " H. F. Schaefer	1,500 00	
" " " F. D. Christhilf	1,500 00	
" " " John Noore	1,500 00	
" " " Robert Rumbold	1,500 00	
" " " E. P. Burke	1,312 50	
" " " C. B. Sadler	1,500 00	
" " " J. E. Shepperd	1,495 00	
" " " I. P. Kane	1,465 00	
Amounts carried forward	$51,000 19	$273,715 00

Amounts brought forward		$51,000 19	$273,715 00
Asst. Engineer "A,"	G. H. Carl	1,465 00	
" " "	S. O. S. Graham	856 85	
" " "	S. M. Klein	575 00	
" " "	G. W. Townsend	1,372 50	
" " "	Ralph Hutchins	1,390 00	
" " "	L. C. Frank	308 33	
" " "	J. H. Ensey	1,267 50	
" " "	J. M. Bandel	1,312 50	
" " "	C. J. Haven	1,292 50	
" " "B,"	R. T. Tunstall	1,200 00	
" " "	J. W. Cleveland	1,190 00	
" " "	J. M. Knight	1,200 00	
" " "	A. W. Gerlach	1,149 99	
" " "	J. L. Chapman	605 00	
" " "	Paul Wroth	1,080 00	
" " "	H. W. Johenning	1,080 00	
" " "	H. M. Webb	1,080 00	
" " "	J. S. Thompson, Jr	1,080 00	
" " "	W. C. Brisco	1,065 00	
" " "	W. S. Wicker	1,135 00	
" " "	T. W. Sasscer	1,155 00	
" " "	E. B. Gilmor	1,187 50	
" " "	J. O. Zeigfield	945 00	
" " "	Edgar Carroll	1,087 50	
" " "	C. J. Hellan	945 00	
" " "	D. G. Frazer	982 50	
" " "	W. J. Frere, Jr	982 50	
" " "	W. L. Prout	1,124 98	
Inspector,	E. T. Davis	1,500 00	
"	C. S. York	1,500 00	
"	J. H. Southoron	1,500 00	
"	G. T. Robinson	937 50	
"	C. J. Hammond	1,500 00	
"	A. D. Tapscott	1,500 00	
"	W. J. Caple	1,437 50	
"	S. A. Lusby	1,200 00	
"	J. F. Garrett	1,200 00	
"	F. DeW. Theobald	1,200 00	
"	G. E. Schaeffer	1,200 00	
"	J. C. Strohm	1,312 50	
"	H. A. Albert	1,200 00	
"	K. E. G. Kaufman	1,200 00	
"	J. H. Gambell	1,200 00	
"	E. B. Richards	1,000 00	
"	Wm. Byrd	1,195 00	
"	H. G. Maynard	1,185 00	
"	Henry Kelly	507 00	
"	A. S. Bartholomaei	1,080 00	
"	M. W. Garrett	1,080 00	
"	L. H. Francis	1,140 00	
"	John Lynch	1,080 00	
"	John Dougherty	1,080 00	
"	Wm. F. Dollover	1,155 00	
"	Wm. Brogden	1,080 00	
"	W. H. Bell	1,080 00	
"	Wm. Wagner	1,080 00	
"	W. E. Hearing	1,080 00	
"	W. H. Vickers	1,080 00	
"	N. E. Brice	1,155 00	
"	C. R. Whitaker	1,135 00	
"	G. B. Roberts	1,125 00	
"	R. E. L. Martin	1,135 00	
"	V. T. Malcolm	1,080 00	
"	J. W. Rogers	378 00	
"	R. W. Bates	714 00	
"	J. C. Marlatt	1,135 00	
"	J. T. Merritt	1,080 00	
"	Stuart Anderson	1,080 00	
"	J. E. Sheridan	1,080 00	
"	W. K. Potter	1,080 00	
"	E. W. Magruder	455 00	
"	N. D. Chase	675 00	
"	J. A. Reynolds	1,080 00	
"	L. C. Wright	330 00	
"	L. N. Fisher	858 33	
Amounts carried forward		$132,180 17	$273,715 00

Amounts brought forward		$132,180 17	$273,715 00
Inspector,	L. E. Massey	225 00	
"	E. H. Nordman	1,072 50	
"	C. P. Schlarb	1,072 50	
"	G. T. Kenly	1,035 00	
"	W. H. Corddry	1,027 50	
"	D. W. Glass	879 43	
"	H. T. Sasscer	1,027 50	
"	H. R. Devilbliss	1,027 50	
"	Louis Cremmona	1,027 50	
"	A. J. Carey	1,027 50	
"	W. J. Boyle	315 00	
"	T. S. Hauck	157 50	
"	G. E. Warren	315 00	
"	G. G. B. Nelson	37 50	
"	L. B. Williams	229 84	
"	C. E. Tausky	1,080 00	
"	A. A. Dyer	714 00	
"	M. G. Shields	714 00	
"	C. W. Henderson	705 00	
"	J. R. Owens	900 00	
"	L. D. Sasscer	900 00	
"	E. J. Wolfe	900 00	
"	B. R. Smith	1,005 00	
"	H. N. Clipchase	900 00	
"	J. B. Maguire	900 00	
"	C. W. Rose	982 50	
"	M. J. Slingluff	900 00	
"	H. P. Brooks	900 00	
"	S. R. Brewer	900 00	
"	R. B. Warren	945 00	
"	A. P. Gwynn	1,012 50	
"	J. K. Bosee	647 50	
"	J. Yearwood	634 35	
"	W. G. Nicholson	100 00	
"	J. C. Spedden	518 95	
"	S. A. Marriam	123 00	
"	M. W. Loving	907 50	
"	G. R. Roberts	37 74	
"	L. C. Miller	982 50	
"	S. T. W. Green	975 00	
"	R. D. Welsh	437 50	
"	E. H. Howard	840 00	
"	E. B. Green	777 50	
"	P. R. Powell	467 50	
"	H. H. Tunis	531 00	
"	C. O. Boyd	519 00	
"	C. M. Fuller	450 00	
"	F. H. Plack	450 00	
"	H. W. Driver	220 00	
"	D. S. Craig	345 00	
"	L. V. Keeler	432 50	
"	L. F. Magness	170 00	
"	K. T. Murphy	435 00	
"	A. Mullikin	441 94	
"	E. C. Debston	436 94	
"	W. C. Geissler	356 85	
"	Robert Hansell	336 29	
"	R. E. Turley	369 19	
"	W. C. Begg	364 35	
"	G. F. Shaw	347 18	
"	W. T. Stone	75 00	
"	T. C. Schaetzle	344 76	
"	C. A. Kastendike	250 00	
"	C. Hildebrand, Jr	262 50	
"	J. T. Brooks	30 00	
"	W. R. Seth	174 19	
"	J. K. Keanney	136 69	
Draughtsman,	C. G. Harig	1,200 00	
"	W. E. Lee	150 00	
"	Robert Dall, Jr	1,200 00	
"	H. A. Browne	1,200 00	
"	C. A. Murphy	1,200 00	
"	M. F. Rodgers	1,195 83	
"	T. D. Conn	974 96	
"	W. L. Iardella	966 63	
Amounts carried forward		$180,029 78	$273,715 00

Amounts brought forward		$180,029 78	$273,715 00
Draughtsman,	C. E. Wood	941 65	
"	Samuel Appleby	884 70	
"	A. C. Betz	945 81	
"	P. F. Davenport	900 00	
"	D. H. Luechessi, Jr	900 00	
"	C. F. Black	962 47	
"	E. M. Hamilton	412 50	
"	J. L. Miller	900 00	
"	H. A. Schneider	900 00	
"	W. I. O'Neill	900 00	
"	J. L. Siems	900 00	
"	C. L. Ofenstein	937 48	
"	Wm. C. Burge	900 00	
"	E. A. Plitt	900 00	
"	W. G. Cole	945 81	
"	C. J. Flayhart	900 00	
"	L. B. Pope	585 00	
"	H. L. Weaver	562 50	
"	G. M. McLean	297 50	
"	E. Tschudy	226 61	
"	C. F. Gross	7 74	
"	W. H. Siems	258 00	
"	R. G. Reese	787 50	
"	A. L. Shalowitz	720 00	
"	W. K. Miller	787 50	
"	O. F. Manger	580 71	
"	J. W. Faulconer, Jr	464 00	
"	C. E. Keefer	405 48	
"	S. H. Mazer	675 00	
"	J. A. Schad	188 00	
"	C. F. Gross	60 00	
"	W. J. Kelliager	15 83	
"	Edwin Fitzell	237 10	
"	H. S. Steelman	255 00	
"	M. D. Swartz	105 48	
"	R. T. Anderson	71 67	
"	W. T. Snyder	25 00	
Rodman "A,"	H. P. Poole	757 50	
" "	G. A. Clark	840 00	
" "	W. W. Herbert	900 00	
" "	A. H. Wernsdorfer	900 00	
" "	C. F. Martin	900 00	
" "	W. A. Twamley	900 00	
" "	J. F. Rooney	900 00	
" "	J. F. Diggs	900 00	
" "	Owen Laws	900 00	
" "	C. D. Cann	817 50	
" "	W. B. Connor, Jr	885 00	
" "	C. G. Walker	885 00	
" "	G. C. Sykes	885 00	
" "	R. E. L. Williams	635 00	
" "	C. E. Woollen	577 50	
" "	E. H. Compton	562 50	
" "	H. R. McCauley	525 00	
" "	A. J. Kutzleb	450 00	
" "	A. W. Tuchs	430 00	
" "	C. T. Wanzer	420 00	
" "	A. T. Hilton	802 50	
" "	J. P. Joynes	787 50	
" "	J. P. McCafferty	802 50	
" "	F. L. Maier	802 50	
" "	H. R. Treiber	787 50	
" "	R. G. Gildea	840 00	
" "	T. G. Stowe, Jr	727 50	
" "	L. Blankman	243 95	
" "	J. P. Bonner	36 29	
" "B,"	Chauncey Brooks	720 00	
" "	O. R. Willey	360 00	
" "	E. S. Trine	720 00	
" "	O. G. Wilbur	270 00	
" "	J. H. McKay	360 00	
" "	G. E. Harris	478 00	
" "	M. E. Davis	317 42	
" "	C. W. Miller	312 58	
" "	R. Alexander	285 48	
Amounts carried forward		$226,099 54	$273,715 00

Amounts brought forward	$226,099 54	$273,715 00
Rodman "B," C. W. Hook	650 00	
" " J. C. Bartholow	398 33	
" " Howard Wilds	264 00	
" " F. B. Beacham	238 06	
" " A. F. Bristor	645 00	
" " M. E. Gerlach	405 00	
" " M. H. Melvin	30 00	
" " Conrad Kraeter	30 00	
" " Robert Piggot	30 00	
" " C. H. Brooks	30 00	
" " C. B. Reynolds	161 67	
" " W. O. Towson	148 33	
" " Robert Downes	103 83	
Stenographer, J. L. Pennington	754 15	
" C. S. Weaver	291 65	
" G. F. Bayliss	256 32	
" E. M. Hughes	900 00	
" S. R. Martin	941 64	
" G. W. Schiminger	900 00	
" Robert Windfohr	889 14	
" J. E. Derenberger	498 00	
" C. M. Stapf	39 68	
" J. E. Freeman	245 00	
" G. L. Hughes	252 50	
File Clerk, M. H. Frank	900 00	
Clerk, W. C. Higgins	675 00	
" M. J. Kerr	523 21	
" K. M. Burns	350 00	
Mechanical Engineer, F. H. Cronin	282 26	
Asst. Mechanical Engineer, J. J. Neal	1,800 00	
Engineer of Tests, G. J. Armeling	62 50	
Laboratory Assistant, Urban Preller	17 50	
		239,812 31
Balance to New Sewerage 1961 Loan		$33,902 69

PUMPING STATION (37).

Salaries, appropriation	$17,500 00

EXPENDITURES.

Mechanical Engineer, F. H. Cronin	$1,817 74	
Operating Engineer, G. F. Frick	1,140 00	
" " H. R. Titter	1,140 00	
Relief Engineer, G. E. Beazley	1,020 00	
Asst. Engineer, E. W. Miles	1,020 00	
Asst. Operating Engineer, A. F. Staffel	1,020 00	
Machinist-Electrician, W. J. Evans	1,017 50	
Fireman, August Dettmer	747 50	
" G. T. Wells	747 50	
" P. N. Kammer	747 50	
" Joseph Kelly	747 50	
Oiler, J. H. Bossom	720 00	
" J. O. Morton	720 00	
" August Furst	720 00	
Day labor	3,318 27	
		16,643 51
Balance to New Sewerage 1961 Loan		$856 49

DISPOSAL PLANT (37).

Salaries, appropriation	$23,876 00

EXPENDITURES.

Chemist-Bacteriologist, H. W. Streeter	$1,431 45	
Electrician-Engineer, F. H. Hantske	1,200 00	
Operating Engineer, J. W. Holden	1,020 00	
" " George Shipley	908 39	
Asst. Chemist, T. R. Schoonmaker	900 00	
Oiler, Walter Grimes	828 90	
" F. Weber	828 90	
" Daniel Bieretz	828 90	
" W. Schroeder	828 90	
Day labor	13,238 58	
		22,014 02
Balance to New Sewerage 1961 Loan		$1,861 98

GENERAL CITY CEMENT LABORATORY (37).

Salaries, appropriation		$7,400 00
EXPENDITURES.		
Engineer of Tests, G. J. Armeling	$1,437 50	
Cement Tester, M. H. Melvin	862 50	
" " Conrad Kraeter	862 50	
Cement Sampler, Robert Piggott	690 00	
" " C. H. Brooks	690 00	
" " J. N. Byrd	627 86	
" " R. M. Roberts	470 00	
Laboratory Assistant, Urban Preller	402 50	
		6,042 86
Balance to New Sewerage 1961 Loan		$1,357 14

REPAIRING AND CLEANING SEWERS (37).

Salaries, appropriation	$18,000 00
EXPENDITURES.	
Day labor	12,035 15
Balance to New Sewerage 1961 Loan	$5,964 85

PUMPING STATION (37).

Expenses, appropriation	$11,500 00
Expended for supplies	10,625 00
Balance to New Sewerage 1961 Loan	$875 00

DISPOSAL PLANT (37).

Expenses, appropriation	$6,000 00
Expended for supplies	5,993 16
Balance to New Sewerage 1961 Loan	$6 84

GENERAL CITY CEMENT LABORATORY (37)

Expenses, appropriation	$500 00	
Receipts	1,534 07	
		$2,034 07
Expended for supplies		705 46
Balance to New Sewerage 1961 Loan		$1,328 61

REPAIRING AND CLEANING SEWERS (37).

Expenses, appropriation	$2,000 00
Expended for supplies	259 34
Balance to New Sewerage 1961 Loan	$1,740 66

SPECIAL EXPENSES (37).

Appropriation	$35,731 00	
Receipts	325 47	
		$36,056 47
EXPENDITURES.		
Rent	$8,712 70	
Typewriting machines and supplies	529 58	
Drawing material	2,282 09	
Stationery and office furnishings	2,531 17	
Printing annual report for 1912	941 60	
Telephone service	2,512 03	
Advisory engineers	1,606 22	
Ice	155 35	
Towel service	504 10	
Baltimore Audit Co., auditing books	100 00	
Amounts carried forward	$19,874 84	$36,056 47

Amounts brought forward	$19,874 84	$36,056 47
Photography	4,011 08	
Blue printing	1,804 01	
Postage	845 00	
Furniture	483 22	
Advertising for proposals	1,796 74	
Car fare	3,669 17	
Filing fixtures and supplies	395 20	
Recording legal documents	125 75	
Printing specifications	875 75	
Leather cases for instruments	216 00	
Repairs to instruments, typewriters and furniture	409 21	
Tablets erected at Pumping Station	384 50	
Miscellaneous	750 76	
		35,641 23
Balance to New Sewerage 1961 Loan		$415 24

CONSTRUCTION EXPENSES (37).

Appropriation	$2,600,000 00	
Brought forward from 1912	2,876,740 92	
Sale of old material and rentals	27,312 56	
		$5,504,053 48

EXPENDITURES.

Day labor, general	$45,774 28	
" " maintaining completed work	5,118 46	
" " making changes in private drains acqd.	3,124 87	
Shifting mains of Water Department	14,119 05	
" conduits of Electrical Commission	677 93	
Paving by City Engineer	39,692 42	
Private drains purchased	12,266 14	
A. Hampson, right-of-way in Druid Hill avenue, near Whitelock street	400 60	
City Collector, taxes (1910-11-12) on property 309 East Biddle street	178 91	
Refunded property-owners to cover cost of carrying sewer connections across sidewalks, the work being done by the property-owners	9,974 29	
Water Dept., bills due by B. F. Sweeten & Sons	1,633 99	
B. F. Sweeten & Sons, balance retained account indebtedness to Water Department	1,320 94	
Coal for Pumping Station	652 20	
Oil	1,447 43	
Electrical fixtures	129 72	
Inlet and manhole frames and grates	2,171 92	
Dripstones	145 55	
Sewer brick and sand	3,038 64	
Tools and hardware	3,017 44	
Lumber	3,485 93	
Terra-cotta pipe, fittings and cement	6,777 97	
Storage of automobile and supplies	703 12	
Hauling and team hire	1,359 17	
Pipe and fittings	2,902 25	
Siphons	270 00	
Repairs to private drains damaged in course of construction	191 98	
Inspecting steel	218 31	
Rubber hose	466 60	
M. J. Beach, concrete work at Back River	382 00	
Two motorcycles, supplies and license	497 60	
Westinghouse electric motor	158 75	
Street sprinkler and cost of operating	825 94	
Lane Bros., for erecting shanty	160 78	
N. C. R. R. Co., for removing obstructions	185 25	
Shanty for use as sub-office	130 85	
Middleton-Thompson Co., excavating trenches, Thames street, east of Broadway	407 00	
Tags used in marking cement	204 00	
Canton R. R. Co., for resurfacing road at Disposal Plant	159 00	
Canton R. R. Co., for right-of-way	200 00	
Miscellaneous	499 32	
	$165,071 50	
Payments on contracts (see following table)	3,547,820 00	
		3,712,891 50
Balance carried forward to 1914		$1,791,161 98

PAYMENTS ON CONTRACTS (37).

Contract.	Contractor.	Paid on Contract.	Paid on Extra Work.	Total Payments.
Pumping Station Machinery	Bethlehem Steel Co.	$137,769 14	$265 14	$138,034 28
Section No. 2, Outfall Sewer	M. A. Talbott Co.	5,206 36		5,206 36
Storm-Water Contract No. 1	M. A. Talbott Co.	5,206 37		5,206 37
Sanitary Contract No. 45	D. Peoples	94 50		94 50
" " " 46	Ryan & Reilly		614 80	614 80
" " " 47	B. F. Sweeten & Son	2,559 21	625 00	3,184 21
Storm-Water Contract No. 9	D. Peoples	16 90		16 90
Sanitary Contract No. 52	Wm. McCarthy & Co.	212 65		212 65
" " " 55	B. F. Sweeten & Son	790 57		790 57
" " " 56	Dietz Engineering Co.	2,358 75		2,358 75
" " " 57	Whiting-Turner Contracting Co.	164 07		164 07
" " " 61	B. F. Sweeten & Son	13 69		13 69
" " " 62	McCay Engineering Co.	1,007 56		1,007 56
" " " 64	Wanner Supply and Hardware Co.	172 13		172 13
Storm-Water Contract No. 12	C. B. Clark & Co.	4,797 00		4,797 00
Sanitary Contract No. 60	D. M .Andrew Co.	1,331 25		1,331 25
" " " 66	B. F. Sweeten & Son	147 36		147 36
" " " 72	B. F. Sweeten & Son	1,544 56		1,544 56
" " " 74	B. F. Sweeten & Son	37,552 27	4,026 70	41,578 97
Storm-Water Contract No. 14	M. M. Elkan	214,210 81	18,422 29	232,633 10
" " " 13	Ryan & Reilly	8,601 52		8,601 52
Sanitary Contract No. 75	W. H. & C. F. Thompson	24,731 77	222 81	24,954 58
Storm-Water Contract No. 16	Fisher & Carozza	389,953 50	1,301 66	391,255 16
Sanitary Contract No. 77	Dolier Engineering Co.	482 25		482 25
" " " 78	Wm. McCarthy & Co.	25,148 13	50 14	25,198 27
" " " 82	Wm. McCarthy & Co.	1,843 16		1,843 16
Storm-Water Contract No. 18	Wm. McCarthy & Co.	5,976 13		5,976 13
" " " 17	N. A. Middleton Co.	332 70		332 70
Sanitary Contract No. 80	Bond & Bates	866 79		866 79
" " " 83	Pacific Flush Tank Co.	123 95		123 95
" " " 79	M. J. Beach	1,368 15		1,368 15
" " " 81	Ryan & Reilly	38,602 57	3,026 70	41,629 27
" " " 84	Ryan & Reilly	705 22		705 22
" " " 85	Gallagher, Boyle & Bryan	898 40		898 40
Storm-Water Contract No. 19	B. F. Sweeten & Son	12,419 71	224 70	12,644 41
" " " 20	Ryan & Reilly	1,035 02	213 09	1,248 11
Sanitary Contract No. 86	B. F. Sweeten & Son	32,210 45	871 43	33,081 88
" " " 87	B. F. Sweeten & Son	110,221 74	3,088 95	113,310 69
" " " 88	James Ferry & Sons	18,628 09	1,439 52	20,067 61
" " " 89	H. C. Brooks & Co.	21,613 29	862 44	22,475 73
" " " 90	Ryan & Reilly Co.	16,870 79	814 37	17,685 16

PAYMENTS ON CONTRACTS (37).—*Continued.*

Contractor.	Contract.	Paid on Contract.	Paid on Extra Work.	Total Payments.
Coal	Lynah & Read	652 20		652 20
Storm-Water Contract No. 21	C. B. Clark & Co	38,544 36	2,479 31	41,023 67
Sanitary Contract No. 92	Gallagher, Boyle & Bryan	1,426 40		1,426 40
" " " 93	Wm. McCarthy & Co	12,733 46		12,733 46
" " " 94	Gallagher, Boyle & Bryan	17,784 90	788 27	18,573 17
" " " 95	Ryan & Reilly	62,625 67	143 85	62,769 52
Storm-Water Contract No. 22	B. F. Sweeten & Son	136,566 54	231 51	136,798 05
Sanitary Contract No. 97	Gallagher, Boyle & Bryan	23,048 79	227 02	23,275 81
" " " 98	James Ferry & Sons	16,998 40		16,998 40
" " " 99	Wm. McCarthy & Co	18,522 72	33 13	18,555 85
" " " 100	Lane Brothers Co	286,130 47	21 94	286,152 41
" " " 101	Standard Lime and Stone Co	78,008 00		78,008 00
" " " 102	C. B. Clark & Co	106,241 77	801 95	107,043 72
" " " 103	Ryan & Reilly	34,197 17	57 21	34,254 38
Storm-Water Contract No. 23	Wm. McCarthy & Co	6,029 62	176 82	6,206 44
Sanitary Contract No. 104	Wm. McCarthy & Co	73,367 73	624 50	73,992 23
" " " 105	Carozza, Lavezza & Carozza	22,700 19	147 74	22,847 93
" " " 106	Wm. McCarthy & Co	37,562 75	238 88	37,801 63
Storm-Water Contract No. 24	B. F. Sweeten & Son	117,887 05		117,887 05
" " " 25	James Ferry & Son	219,996 11		219,996 11
Sanitary Contract No. 107	F. Bruno & Co	100,996 01	553 29	101,549 30
" " " 109	Carozza, Lavezza & Carozza	85,534 39	1,493 85	87,028 24
" " " 108	W. H. Thompson Contracting Co	17,834 32		17,834 32
" " " 110	McCarthy & O'Herron	102,326 93	255 43	102,582 36
Storm-Water Contract No. 26	McCarthy & O'Herron	195,736 16	133 06	195,869 22
" " " 27	Ryan & Reilly	23,934 38	570 88	24,505 26
Sanitary Contract No. 111	Middleton-Thompson Co	88,501 92	932 00	89,433 92
" " " 114	C. B. Clark & Co	56,684 08		56,684 08
" " " 115	Carozza, Lavezza & Carozza	24,740 37	307 03	25,047 40
" " " 116	Gallagher, Boyle & Bryan	154,657 60	298 23	154,955 83
Storm-Water Contract No. 28	Guild & Co	63,884 92		63,884 92
" " " 29	Whiting-Turner Co	9,334 42		9,334 42
Sanitary Contract No. 117	W. H. Thompson Contracting Co	39,511 83		39,511 83
" " " 118	McCarthy & O'Herron	30,150 68		30,150 68
" " " 121	Whiting-Turner Co	34,430 71		34,430 71
Storm-Water Contract No. 30	McCarthy & O'Herron	16,451 12		16,451 12
" " " 31	Ryan & Reilly Co	12,254 23		12,254 23
Sanitary Contract No. 113	John Dannini	1,832 16	33 95	1,866 11
Storm-Water Contract No. 32	Guild & Co	3,591 40		3,591 40
Total		$3,501,200 41	$46,619 59	$3,547,820 00

SEWER CONNECTIONS (37).

Collected by City Collector		$14,695 32
Paid into city treasury		14,695 32

BRIDGES A—VI (38.)

MAINTENANCE OF BRIDGES AND CULVERTS (38).

Appropriation	$18,000 00	
Empty cement bags returned	237 11	
Transferred from Emergency Fund	7,000 00	
		$25,237 11

EXPENDITURES.

Labor, as per pay rolls	$12,974 84	
Lumber	4,143 38	
Tools and hardware	631 12	
Paints, oils and brushes	503 98	
Hauling	1,336 61	
Cement	757 19	
Paving sand and gravel	242 13	
Structural steel	485 00	
Ornamental lamps and posts installed	251 52	
Wiring Calvert and St. Paul Street bridges	1,745 46	
" Harford Avenue Bridge over Herring Run	387 78	
Draughting room and field supplies	127 21	
Masonry work	203 28	
Reinforcing floor beams	504 63	
Incidentals and miscellaneous	699 73	
Miscellaneous	157 63	
		25,151 49
Balance to Surplus 1913		$85 62

ENCASING THE LOWER MEMBERS OF THE CALVERT STREET BRIDGE IN CONCRETE (38).

Appropriation		$7,000 00

EXPENDITURES.

Labor, as per pay roll	$465 31	
Reinforcing floor beams of Calvert Street Bridge	6,492 87	
Miscellaneous	41 82	
		7,000 00

LIGHT STREET BRIDGE, MAINTENANCE AND SALARIES (38).

Appropriation	$16,619 00	
Received from United Railways and Electric Company	172 25	
		$16,791 25

EXPENDITURES.

Advertising	$9 50	
Lights	110 09	
Crew	5,051 92	
Extra crew	3,567 25	
Repairs	289 11	
Supplies	539 69	
Fuel	269 18	
Lumber	6,919 88	
		16,756 62
Balance to Surplus 1913		$34 63

WIDENING PRATT STREET—PRATT STREET BRIDGE AND PROPERTY (38).

Brought forward from 1912		$74,359 64

EXPENDITURES.

Contractors, D. V. Ault & Co.	$19,460 31	
Lights	224 85	
Miscellaneous	78 59	
		19,763 75
Balance carried forward to 1914		$54,595 89

MISCELLANEOUS A—VI (39).

MAINTENANCE OF PROPERTY YARD (39).

Appropriation		$2,800 00

EXPENDITURES.

Labor, as per pay rolls	$2,335 00	
Lumber	169 72	
Miscellaneous	277 97	
		2,782 69
Balance to Surplus 1913		$17 21

INSURANCE ON CITY PROPERTY (39).

Appropriation	$10,000 00	
Return premiums	44 70	
		$10,044 70

EXPENDITURES.

Street Cleaning Department, stables	$3,496 84	
Bay View Asylum	1,216 25	
Sydenham Hospital	123 75	
School Board Books and supplies	255 00	
New Polytechnic Institute	910 30	
Old Polytechnic Institute	201 95	
Tug "E. Clay Timanus"	345 00	
House, Laurel street	4 00	
" Woodbrook avenue	19 20	
Old schoolhouse, Poultney street	140 64	
Fourth Regiment Armory	35 00	
Boiler, Centre Market	35 00	
Elevator, Centre Market	18 90	
Elevators, City Hall and Court House	438 75	
Boiler, Bath House, Argyle avenue	10 00	
" Light Street Bridge	75 00	
" City College	82 00	
" Bay View Asylum	137 95	
		7,545 53
Balance credited to City Property Insurance Fund		$2,499 17

RAILROAD SIDING AND TRAMWAY, BAY VIEW ASYLUM (39).

Balance brought forward from 1912		$3,822 81

EXPENDITURES.

Contractor, J. H. McLauchlan Engineering Company	$3,360 00	
Extra work on above contract	158 81	
P., B. & W. R. R. Co., completion of track work, including rearrangement of surface drainage	191 75	
Miscellaneous	112 25	
		3,822 81

FOR OPENING, CONSTRUCTING AND ESTABLISHING A PUBLIC HIGHWAY OVER, ALONG AND NEAR JONES FALLS (39).

Appropriation	$500,000 00	
Receipts	2,203 64	
		$502,203 64

EXPENDITURES.

Paving.

Salaries	$5,651 37	
D. M. Andrew Co., contract, Section 1	65,637 08	
D. M. Andrew Co., contract, Section 2	18,010 67	
D. M. Andrew Co., extra work	1,568 31	
J. H. Peddicord & Son, hauling	158 63	
Morris Iron Company, posts	633 37	
Dietrich Brothers, iron work	510 93	
A. Waldeck, photographs	132 50	
E. T. Foreman, hauling	421 08	
Sewerage Commission	10,768 90	
City Engineer	6,873 78	
Amounts carried forward	$110,366 62	$502,203 64

Amounts brought forward	$110,366 62		$502,203 64
James J. Lacy Company	1,547 06		
Robert J. McCuen, Superintendent of Lamps	157 02		
Luden Machine Company	120 00		
Consolidated Gas Company	1,095 00		
Nellie W. Parks	2,590 02		
S. T. Williams	489 23		
Miscellaneous	523 08		
		$116,888 03	

Viaduct.

Salaries	$2,786 03		
Stewart-Jones & Claiborne-Johnston Company, contract	40,717 15		
Stewart-Jones & Claiborne-Johnston Company, extra work	388 19		
Sewerage Commission	1,645 51		
T. W. Pietsch	500 00		
A. W. Buel	300 00		
Young & Son	210 00		
M. M. Elkan	245 39		
Miscellaneous	650 78		
		47,443 05	
			164,331 08
Balance to Jones Falls 1961 Loan			$337,872 56

MOTOR VEHICLES—LICENSES AND FINES (39).

Received from State Treasurer, being one-fifth of the receipts of the Commissioner of Motor Vehicles, after deducting his expenses	$28,986 05
Paid into city treasury	28,986 05

5. PUBLIC INDUSTRIES

WATER WORKS A—VI (40.)

WATER ENGINEER'S DEPARTMENT (40).

Salaries, appropriation		$106,920 00	
Returned salary		43 33	
			$106,963 33

EXPENDITURES.

Executive Office.

Water Engineer, Ezra B. Whitman	$4,000 00		
Secretary to Engineer, C. L. Rector	1,795 00		
Stenographer and Clerk, John J. Monaghan	900 00		
Office Clerk, John Sterkel, Jr.	361 50		
Messenger and Clerk, Barney L. Hess	777 50		
		$7,834 00	

Engineering Division.

Assistant Water Engineer, Robert L. Clemmitt	$2,400 00		
Clerk to Asst. Engineer, Thomas P. Bolgiano	1,200 00		
Stenographer and Clerk, J. H. L. Trautfelter	897 50		
Mechanical Engineer, G. H. Leaverton	1,500 00		
Civil Engineer, T. D. Levering	1,200 00		
Office Engineer, Walter E. Lee	1,000 00		
Draughtsman, John Weber	1,020 00		
" M. L. Hoffacker	960 00		
" W. C. Caldwell	960 00		
" E. A. Faber	960 00		
Inspector Grade "D," H. N. Gambrill, Jr.	818 33		
" " " J. S. Strohmyer	818 33		
Meter Inspector, Robert E. Cather	920 00		
" " S. S. Christ	200 00		
" " Charles Carbis	560 00		
Inspector Fire Supplies, H. S. Welch	920 00		
Amounts carried forward	$16,334 16	$7,834 00	$106,963 33

Amounts brought forward	$16,334 16	$7,834 00	$106,963 33
Service Inspector, James Clancy	862 50		
" " George A. Hibbitts	862 50		
Meter Tester, William E. Kerr	900 00		
Rodman, Henry J. Leffert	780 00		
Meter Clerk, J. H. Clarke	31 25		
Draughtsman, John E. Holt	440 00		
		20,210 41	
Auditing Division.			
Auditor, Charles W. Nagle	$1,972 50		
Paymaster, F. L. Webb	1,500 00		
General Bookkeeper, W. F. Yost	1,500 00		
Order Clerk, W. Lee Hawkins	1,115 83		
		6,088 33	
Construction Division.			
Superintendent, George R. Truelove	$1,989 17		
Asst. Superintendent of Insp., William J. West	1,300 00		
Clerk to Superintendent, Louis Bach	840 00		
Office Clerk, Alexander Barber	900 00		
Asst. Office Clerk, B. H. Geipe	840 00		
General Foreman, M. F. Gorman	1,320 00		
Chief Record Clerk, A. S. Carr, Jr.	1,079 30		
Asst. Record Clerk, J. P. Phillipps	1,020 00		
" " " O. C. Berry	900 00		
" " " A. S. Frank	900 00		
" " " James R. Carroll	805 00		
Storekeeper, T. Tipton	960 00		
Foreman of Paving, J. M. Toner	1,080 00		
Watchman, C. Stamm	717 50		
" William Murray	717 50		
Foreman of Wagons, J. L. Lang	900 00		
Draughtsman, J. M. McKee	960 00		
Messenger, Charles Geller	720 00		
		17,948 47	
Mechanical Division.			
Superintendent, A. O. Babendreier	$2,000 00		
Chief Clerk, A. Stanley Bryan	1,020 00		
First Asst. Clerk, M. A. Rogers	112 50		
" " " John W. Starr	787 50		
Second Asst. Clerk, John J. Wagner	780 00		
" " " John W. Starr	90 00		
Shop Clerk, William Volkert	630 00		
Stenographer, H. F. Zepp	805 00		
Foreman of Hauling, Joseph L. Cilento	840 00		
Yard Clerk, J. H. Clarke	805 00		
Foreman of Yard, Daniel Maskell	900 00		
Hostler, D. Strube	780 00		
Asst. Hostler, Samuel Bateman	717 50		
Watchman, D. P. Hayes	717 50		
" J. M. Cecil	717 50		
		11,702 50	
Mount Royal Pumping Station.			
Pump Engineer, W. E. Moore	$997 50		
" " William H. Hyman	237 50		
" " Thomas E. Kelly	950 00		
Engineer in Charge, F. E. Fitzgerald	1,266 66		
Dynamo Engineer, John Payton	1,020 00		
" " N. Kraning	1,020 00		
Conveyor Engineer, E. Omohundro	1,020 00		
Oiler, J. W. Granger	720 00		
" J. E. Murphy	720 00		
" H. E. Baker	720 00		
Fireman, John Armiger	780 00		
" P. Pendergast	780 00		
		10,231 66	
Eastern Pumping Station.			
Engineer in Charge, Henry Becker	$981 67		
Pump Engineer, Otto Boettger	237 50		
" " A. J. Benner	1,140 00		
" " F. W. Freimuth	1,140 00		
" " Thomas E. Kelly	237 50		
Amounts carried forward	$3,736 67	$74,015 37	$106,963 33

Amounts brought forward	$3,736 67	$74,015 37	$106,963 33
Oiler, A. L. McBurney	720 00		
" Edward Yealdhall	690 00		
" Joseph Lycett	510 00		
Fireman, J. Roche	325 00		
" A. Lemon	195 00		
" A. Matijosky	780 00		
" M. Amendt, Jr.	227 50		
		7,184 17	
Western Pumping Station.			
Engineer in Charge, L. M. Flaherty	$1,067 50		
Pump Engineer, W. E. Moore	190 00		
" " George J. Reinking	843 93		
Oiler, Charles Lancaster	720 00		
" M. Wade	720 00		
" W. F. Hurley	210 00		
Fireman, F. A. McFadden	720 00		
" G. F. Lingner, Jr.	720 00		
" J. Slemacker, Jr.	720 00		
		5,911 43	
Relief Crew at Pumping Stations.			
Pump Engineer, F. H. Meyers	$807 50		
Fireman, M. Amendt, Jr.	552 50		
Oiler, W. F. Hurley	510 00		
		1,870 00	
County Division.			
Superintendent, William Benthall	$2,000 00		
Clerk to Supt. and Asst. Paym'r, A. J. Trageser	895 00		
Water Shed Inspector, William M. Nelson	900 00		
Keeper Lake Montebello, William M. Kenly	444 17		
" " " Fred. Shanklin	325 00		
Foreman Lake Montebello, Fred. Shanklin	385 00		
Watchman Lake Montebello, J. Lochmann	600 00		
Keeper Lake Clifton, George Kelly	780 00		
" Guilford Reservoir, John Devoy	720 00		
" Hampden Reservoir, D. F. McMenamin	780 00		
" Roland Standpipe, B. Plageman	720 00		
" W. A. Standpipe, Charles Hoffman	720 00		
" Lake Roland, John Boone	780 00		
" Loch Raven, M. Dapprich	780 00		
" Lake Ashburton, R. T. Richardson	720 00		
Gate Keeper Loch Raven, M. Foley	720 00		
Overpayment (returned as above)	43 33		
		12,312 50	
			101,293 47
Balance to Surplus 1913			$5,669 86
Expenses. appropriation		$536,777 00	
Sales materials		1,916 11	
			$538 686 11
EXPENDITURES.			
Books, stationery and printing		$2,270 28	
Drawing materials		197 58	
Furniture and fixtures		2,406 60	
Fuel		45,953 52	
Labor		308,114 13	
Hauling		2,619 44	
Cast-iron pipe		35,381 17	
Cast-iron pipe fittings		6,892 82	
Special iron castings		10,425 10	
Valves		1,993 00	
Wrought-iron pipe and fittings		1,297 77	
Service pipe		7,026 77	
Brass service pipe connections		4,662 21	
Brass castings		6,032 66	
Bar iron and steel		1,358 30	
Lead		2,367 13	
Lumber		3,992 79	
Rope and packing		999 25	
Amounts carried forward		$443,990 52	$538,686 11

Amounts brought forward	$443,990 52	$538,686 11
Grease, waste, paints and oil	4,282 26	
Rubber	1,639 75	
Brick, stone and cement	996 90	
Sand, gravel and ashes	111 00	
Feed	3,184 36	
Insurance	1,058 07	
Current expenses	12,082 43	
Miscellaneous and emergencies	28,751 77	
Repaving	10,339 77	
Lime and alum	29,412 15	
Meters	1,272 59	
		537,121 57
Balance to Surplus 1913		$1,564 54

COLLECTOR OF WATER RENTS AND LICENSES (40).

Salaries, appropriation		$30,220 00

EXPENDITURES.

Collector of Water Rents and Licenses, Daniel J. Loden	$2,500 00	
General Bookkeeper, Otis C. Brownley	1,600 00	
Casier, A. Stanley Wier	1,600 00	
Chief Clerk, James J. Scully	58 34	
" " James J. Scully	1,533 33	
Ledger Clerk, Fred. W. Lustnauer	200 00	
" " August A. Doyle	1,050 00	
" " William E. Martin	1,200 00	
" " James E. Burke	850 00	
" " Thomas F. Herr	1,200 00	
" " Matt. T. Valentine	1,200 00	
" " Robert K. Lewis	1,200 00	
" " William K. Tubman	1,200 00	
" " Percy L. Reinhart	1,200 00	
" " Edward J. Edwards	1,200 00	
" " Charles H. Walker	1,200 00	
" " Chester M. Gourley	1,200 00	
" " Thomas A. Moran	850 00	
" " Daniel L. Constantine	250 00	
" " Charles C. Brown	150 00	
Inspector, Charles C. Brown	875 00	
" Thomas A. Moran	291 67	
" Samuel A. Hart	1,000 00	
" John T. Jones	1,000 00	
" Dennis J. Lanahan	833 33	
" Joseph T. Gallagher	1,000 00	
" J. Frank Pearson	708 33	
" Charles H. Eisenhardt	1,000 00	
" Andrew Schrufer	1,000 00	
" Thomas M. Elliott	166 67	
Stenographer, Mary R. Dean	520 00	
		29,836 67
Balance to Surplus, 1913		$383 33

Expenses, appropriation		$2,055 00

EXPENDITURES.

Stationery and printing	$1,067 82	
Postage	241 00	
Burrough's adding machine	196 00	
Telephone service	170 04	
Employes' bonds	136 25	
Car fare	115 35	
Miscellaneous	107 97	
		2,034 43
Balance to Surplus 1913		$20 57

INTEREST ON WATER LOANS (40).

Appropriation		$415,000 00

EXPENDITURES.

5 per cent. on $5,000,000, due 1916	$250,000 00	
4 per cent. on 500,000, due 1922	20,000 00	
4 per cent. on 1,000,000, due 1926	40,000 00	
3½ per cent. on 1,000,000, due 1943	35,000 00	
3½ per cent. on 2,000,000, due 1945	70,000 00	
		415,000 00

SINKING FUND 1943 LOAN (40).

Appropriation	$22,500 00
1½ per cent. 1913 water receipts	21,614 43
Balance to Surplus 1914	$885 57

WORK DONE IN ADVANCE OF IMPROVED PAVING (40).

Appropriation		$93,000 00

EXPENDITURES.

Labor	$56,290 48	
Materials delivered from stock	91,541 43	
		147,832 01
Debit balance carried forward to 1914 (authorized by Board of Estimates and provided for in the Ordinance of Estimates for the year 1914)		$54,832 01

AUXILIARY PUMPING STATION—LAKE ASHBURTON (40).

Appropriation	$10,500 00
No expenditures—Carried forward to 1914	10,500 00

CLEANING MAINS IN ADVANCE OF FILTRATION (40).

Appropriation		$15,000 00

EXPENDITURES.

Salaries	$75 00	
Labor	326 47	
		401 47
Balance carried forward to 1914		$14,598 53

PITOMETER SURVEY FOR UNDERGROUND LEAKS (40).

Appropriation	$5,000 00	
Receipts	472 46	
		$5,472 46

EXPENDITURES.

Salaries	$972 70	
Labor	3,206 46	
Tools and instruments	542 85	
Furniture and fixtures	110 43	
Miscellaneous	640 02	
		5,472 46

REPAIRS TO PUMPING STATIONS (40).

Appropriation	$31,700 00

EXPENDITURES.

Materials delivered from stock	3,977 89
Balance carried forward to 1914	$27,722 11

GUNPOWDER SUPPLY IMPROVEMENT DIVISION (40).

Salaries, appropriation	$75,860 00	
Return	32 50	
		$75,892 50

EXPENDITURES.

Division Engineer, Emory Sudler	$3,450 00	
Assist. Division Engineer, P. A. Beatty	2,395 83	
Resident Engineer, J. K. Flick	1,725 00	
" " J. T. Todd	1,079 03	
" " E. L. Pattison	1,425 00	
Asst. Engineer Grade "A," E. L. Pattison	250 00	
" " " " Guy Bonney	1,125 00	
" " " " Guy L. Hess	1,125 00	
" " " "B" Guy Bonney	250 00	
" " " " Guy L. Hess	250 00	
" " " " George A. Bryant, Jr.	900 00	
" " " " James Baird	450 00	
Instrument Man, George A. Bryant, Jr.	187 50	
" " James Baird	525 00	
" " R. K. Linville	450 00	
" " O. M. Kelly	337 50	
" " G. Steuart Giles	75 00	
Rodman, Theodore J. Tubman	747 50	
" H. A. Jones	747 50	
" Charles Mealy	747 50	
" Edward Chenoweth	747 50	
" William Finn	487 50	
" O. M. Kelly	455 00	
" S. T. Vocke	747 50	
" Elmer Lawson	747 50	
" Samuel Syret	747 50	
" Charles Powell	747 50	
Axeman, Harry Stewart	575 00	
" Charles Francis	575 00	
" Joseph Parks	575 00	
" Henry Kling	575 00	
" William Brown	325 00	
" Henry Reier	575 00	
Draughtsman Grade "B," G. E. Sponsler	600 00	
" " "C," G. E. Sponsler	495 00	
" " " J. O. B. Coulling	1,035 00	
" " "D," G. C. Hauser	862 50	
" " " K. E. Wilson	862 50	
" " " George Ault	862 50	
Inspector Grade "A," D. P. Wysong, Jr.	750 00	
" " " A. E. B. Jones	562 50	
" " "B," C. A. Warren	1,150 00	
" " " D. P. Wysong, Jr.	400 00	
" " "C," M. C. Bosley	1,035 00	
" " " E. S. Fry	1,035 00	
" " " J. F. Williams, Jr.	807 68	
" " " Harry M. Sumwalt	432 25	
" " " Frank P. Shaney	540 00	
" " " Joseph C. Reid	135 00	
" " " J. C. Schenck	1,035 00	
" " " Royston Stiffler	668 04	
" " "D," Thomas B. McAllister	52 50	
Chemist, J. Bosley Thomas	1,437 50	
Assistant Chemist, E. A. Sandman	862 50	
Laboratory Assistant, B. Cole	747 50	
Messenger, Lee Gosnell	690 00	
Chief of Police, John Malley	416 66	
" " " William E. Sheehey	374 99	
Patrolman, J. F. Walsh	150 00	
" Robert I. Christie	562 50	
" J. L. Brennan	150 00	
" William E. Sheehey	300 00	
" John Patrone	562 50	
" J. L. Griffith	257 14	
" E. T. Luckey	150 00	
" George A. Smith	280 00	
Clerk, C. L. Gambrill	393 33	
" Herbert L. Grymes	750 00	
Stenographer, H. H. Goldberg	862 50	
Tracer, Wilbert Robinson, Jr.	496 00	
Return	32 50	
		48,918 45
Balance to Water 1958 Loan		$26,974 05

FILTRATION DIVISION (40).

Salaries, appropriation		$37,900 00
EXPENDITURES.		
Division Engineer, James W. Armstrong	$3,450 00	
Assistant Division Engineer, Steuart Purcell	2,395 84	
Chief Draughtsman, A. L. Reeder	2,012 50	
Designing Engineer, George Weighardt	1,650 00	
Asst. Engineer Grade "AA," H. A. Loser	1,725 00	
" " " "A," A. E. B. Jones	875 00	
" " " "B," Edwin J. Lake	273 33	
Draughtsman Grade "A," Leon Small	1,437 50	
" " "B," E. H. Eardley	1,150 00	
" " " V. B. Siems	1,150 00	
" " "C," H. J. Horn	1,035 00	
" " " Carlton D. Cann	84 00	
" " "D," Frank Fahm, Jr.	862 50	
" " " Thomas B. McAllister	412 50	
Stenographer, Herbert L. Grymes	300 00	
" Holland A. Gordy	147 58	
" I. B. Kries	364 11	
Asst. Sec'y to Engineer and Board, Leo F. Winterling	1,150 00	
Rodman, J. R. Gould	105 78	
" Carroll D. Weatherly	152 02	
Instrument Man, R. K. Linville	412 50	
		21,145 16
Balance to Water 1958 Loan		$16,754 84

EXTENSION OF WATER SYSTEM UNDER THE ACT (40).

Appropriation	$2,497,000 00	
Sales of materials	2,683 88	
		$2,499,683 88
EXPENDITURES.		
Labor	$39,189 88	
Material delivered from stock	21,889 49	
Professional and legal services	7,556 78	
New dam at Loch Raven	247,725 15	
Bridge No. 1	53,769 30	
Filtered water reservoirs	92,042 37	
Steel pipe conduit	138,049 85	
Road No. 1	19,586 92	
Filters, basin and grading	59,409 18	
Venturi meter	4,320 00	
Sluice gates	4,566 00	
Bridge No. 2	18,070 59	
Head house and conduit	13,223 34	
Spur track	11,539 26	
C. I. pipe, filtration plant	4,089 39	
Land for new reservoir	20,216 43	
Land for filtration plant	26,167 94	
Purchase of right-of-way	4,813 24	
Advertising	1,366 14	
Office rent	1,359 96	
Moving Brodie house	1,164 40	
Books, stationery and printing	2,657 02	
Furniture and fixtures	80 65	
Lumber	775 91	
Horse feed	628 73	
Rubber	274 67	
Hauling	603 29	
Grease, waste, paints and oils	139 85	
Drawing materials	852 24	
Insurance	176 70	
Inspection	832 07	
Trees	993 59	
Fuel	262 14	
Horses and wagons	695 70	
Laboratory supplies	155 98	
Instruments	887 03	
Building materials and fixtures	1,067 91	
Steel work	38 25	
Supplies for survey corps	5,119 25	
Repairs and alter'ns, Anderson house, Lake Montebello	4,552 26	
Miscellaneous expenses	3,160 80	
Miscellaneous supplies	3,240 19	
		817,309 84
Balance to Water 1958 Loan		$1,682,374 04

NEW PUMPS AND BOILERS, MOUNT ROYAL PUMPING STATION (40).

Brought forward from 1912		$112,059 97

EXPENDITURES.

Construction and installation	$50.313 91	
Materials delivered from stock	15,870 39	
Labor	8,681 01	
Valves	5,522 46	
Lumber	511 17	
Hauling	411 85	
Miscellaneous	236 42	
		81,547 21
Balance carried forward to 1914		$30,512 76

WATER DEPARTMENT REVENUE (40).

Receipts from water rents (through Collector of Water Rents and Licenses) and sale of old material and Water Department property rentals (through Water Engineer's Department)	$1,485,903 56
Refunds of water rents	3,958 43
Paid into city treasury	$1,481,945 13

METERS (40).

Expenditures	$8,372 11
Receipts	7,099 52
Debit balance charged to surplus, 1913	$1,272 59

CONSTRUCTION RESERVOIR—LAKE ASHBURTON (40).

Brought forward from 1912	$5,048 43
No expenditures—Carried forward to 1914	5,048 43

CITY REAL ESTATE A—VI (41).

GROUND RENTS ON CITY PROPERTY (41).

Appropriation		$45,000 00

EXPENDITURES.

School No. 1	$354 00	
“ “ 2	250 00	
“ “ 3	350 00	
“ “ 4	345 00	
“ “ 5	600 00	
“ “ 6	112 50	
“ “ 8	221 34	
“ “ 9	1,094 75	
“ “ 10	200 00	
“ “ 11	757 00	
“ “ 12	268 00	
“ “ 13	530 00	
“ “ 14	840 00	
“ “ 15	700 00	
“ “ 16	790 00	
“ “ 17	217 00	
“ “ 18	114 66	
“ “ 20	592 00	
“ “ 21	320 00	
“ “ 22	177 50	
“ “ 23	150 00	
“ “ 26	126 00	
“ “ 27	274 50	
“ “ 28	270 00	
“ “ 29	570 00	
“ “ 30	750 00	
“ “ 31	228 00	
“ “ 34	385 00	
“ “ 42	244 44	
“ “ 43	900 00	
“ “ 44	600 00	
Amounts carried forward	$13,331 69	$45,000 00

Amounts brought forward	$13,331 69	$45,000 00
School No. 45	600 00	
“ “ 46	800 00	
“ “ 47	1,001 00	
“ “ 48	700 00	
“ “ 58	22 50	
“ “ 60	480 00	
“ “ 61	1,155 00	
“ “ 67	360 00	
“ “ 68	240 00	
“ “ 70	175 00	
“ “ 71	19 00	
“ “ 72	620 62	
“ “ 73	25 00	
“ “ 75	400 00	
“ “ 76	350 00	
“ “ 77	581 25	
“ “ 78	480 00	
“ “ 79	1,020 00	
“ “ 81	620 00	
“ “ 82	236 00	
“ “ 91	315 00	
“ “ 92	372 50	
“ “ 93	1,300 00	
“ “ 94	501 75	
“ “ 96	480 00	
“ “ 101	200 00	
“ “ 106	192 00	
“ “ 107	70 00	
“ “ 108	134 00	
“ “ 110	480 00	
“ “ 111	130 00	
“ “ 112	630 00	
“ “ 115	50 00	
“ “ 116	150 00	
Fourth Regiment Armory	1,188 00	
Eastern High School (old)	615 90	
Baltimore City College	4,600 00	
Polytechnic Institute (old)	220 00	
Colored High School	1,147 50	
Engine House No. 1	105 00	
“ “ “ 2	62 50	
“ “ “ 3	150 00	
“ “ “ 6	62 00	
“ “ “ 7	51 00	
“ “ “ 11	123 75	
“ “ “ 12	150 00	
Hook and Ladder No. 1	100 00	
“ “ “ “ 7	75 00	
“ “ “ “ 8	61 50	
Chemical Company No. 2	72 00	
Lot on Belair road	40 00	
Northeast Market	1,200 00	
Cross Street Market	974 00	
Lexington Market	228 00	
Central Police Station (old)	120 00	
City Hall	56 00	
Lot on Stiles street	160 00	
Property yard	540 00	
Lot on Chester street and Ashland avenue	829 76	
“ “ Pennsylvania avenue, near Biddle street	1,500 00	
“ “ South Frederick street	258 00	
“ “ Philpot lane, near Pratt street	20 00	
Central Police Station (new)	600 00	
Street Cleaning Stable, East Pratt street	175 00	
		43,707 22
Balance to Surplus, 1913		$1,292 78

RENTALS FROM CITY PROPERTY (41).

RECEIPTS.

M., D. & V. Ry. Co., bulkhead foot of Conway St.	$3,510 00
B., C. & A. Ry. Co., bulkhead foot of Camden St.	3,618 00
Morris Shuger, Collector, various properties	876 50
Colored Democratic League (old engine house West Biddle St.)	75 00
F. J. Bailey (dwelling house Polytechnic Inst. lot, North Ave.)	480 00
J. Ferry & Son (half lot, rear No. 47 Schl., Lakew'd and East'n Aves.)	165 00
Amount carried forward	$8,724 50

Amount brought forward	$8,724 50
Wm. F. Broening, State's Attorney (offices in Court House)	750 00
P. C. Dugan & Nephew, agents (813-15-17 Pennsylvania Ave., 825 Tessier St., and 2515 Woodbrook Ave.)	1,120 05
Maryland Institute (two upper floors Centre Market)	500 00
J. H. Pinning (Clarke and Graves Sts.)	125 00
N. Frank & Son (Stiles St.)	80 00
P., B. & W. R. R. Co. (Ordinance No. 236, February 28, 1913)	525 00
Chesapeake Manufacturing Company, Old Public School No. 17, Southwest corner Light and Poultney Sts.	233 33
Adjutant-General of Maryland (Rich. Mkt. Hall for Naval Reserves)	5 00
Lane Bros. (lot, Guilford Ave., between Biddle and Preston Sts.)	450 00
O'Keefe Bros. and Goldstrom Bros. ("cloth mills" on Frederick road, Gwynn's Falls and W. M. Ry.)	500 00
Fisher & Carozza (lot, Guilford Ave., bet. Biddle and Preston Sts.)	150 00
John Garvey (wharf property)	60 00
Charles A. Jording (wharf property)	26 00
Skinner Shipbuilding & Dry Dock Company (wharf property)	99 96
Oliver Reeder & Son (wharf property)	100 00
Mitchell Lawrence (wharf property)	175 00
Consolidated Engineering Company (wharf property)	80 00
B., C. & A. Steamboat Co. (wharf property)	5 00
H. M. Williams & Co. (wharf property)	25 00
	$13,733 84
Commissions paid Morris Sugher, Collector, and repairs	211 82
Paid into city treasury	$13,522 02

SALES OF CITY PROPERTY (41).

RECEIPTS.

West Construction Company, property at Clarke and Graves Sts. (Comptroller's Deed File 115)	$800 30
P., B. & W. R. R. Co. (Ord. No. 235, approved Feb. 28, 1913)	800 00
Paid into city treasury	$1,600 30

MARKETS A—VI (42).

ASSISTANT MARKET MASTERS (42).

Salaries, appropriation		$6,400 00

EXPENDITURES.

James Dean (Belair Market)	$900 00	
George Bewig, Sr. (Canton Market)	450 00	
Thomas E. Jacobs (Centre Market)	600 00	
Timothy M. Kelly (Cross Street Market)	700 00	
Edward I. Novak (Fell's Point Market)	600 00	
John C. Dietz (Hanover Market)	450 00	
George N. Schaefer (Hollins Market)	500 00	
Louis Kuhl (Lafayette Market)	450 00	
John C. McLaughlin (Lexington Market)	900 00	
George M. Champness (Northeast Market)	400 00	
George W. Wells (Richmond Market)	450 00	
		6,400 00

MARKET CLEANERS AND EMPLOYES (42).

Appropriation		$9,100 00

EXPENDITURES.

Belair Market	$680 00	
Canton Market	149 98	
Cross Street Market	392 40	
Fell's Point Market	600 00	
Hanover Market	342 00	
Hollins Market	418 92	
Lafayette Market	315 00	
Lexington Market	1,269 20	
Northeast Market	225 00	
Richmond Market	315 00	
Amounts carried forward	$4,707 50	$9,100 00

Amounts brought forward		$4,707 50	$9,100 00
Centre Markets—			
Cleaners	$1,026 00		
Engineer	900 00		
Fireman	720 00		
Watchman	720 00		
		3,366 00	
			8,073 50
Balance to Surplus 1913			$1,026 50

TABLES OF RECEIPTS OF THE VARIOUS MARKETS FOR 1912-1913 (42).

Belair Market.

	Licenses	Rents	Total, '13	Total, '12
Butcher stalls..................	$80 00	$1,204 00	$1,284 00	$3,054 00
Permanent and eave stalls.....	1,030 00	303 00	1,333 00	2,627 00
Movable stalls.................	140 00	48 00	188 00	275 00
Fish stalls.....................	70 00	39 00	109 00	181 00
Street stalls...................	1,535 00	....	1,535 00	1,543 50
Per diems......................	....	....	4,187 55	3,393 20
	....	....	$8,636 55	$11,073 70
Old material...................	....	....	....	26
Total..................	....	....	....	$11,073 96

Canton Market.

	Licenses	Rents	Total, '13	Total, '12
Butcher stalls.................	....	$29 00	$29 00	$62 00
Permanent and eave stalls.....	$170 00	44 00	214 00	211 00
Fish stalls.....................	....	....	....	7 00
Per diems......................	....	175 50	175 50	147 70
Total..................	....	....	$418 50	$427 70

Centre Markets.

	Licenses	Rents	Total, '13	Total, '12
Rent, C. L. Applegarth.......	....	$1,200 00	$1,200 00	$900 00
“ C. N. Merritt...........	....	150 00	150 00	150 00
“ Adams Express Co......	....	45 00	45 00	....
“ U. S. Express Co.......	....	90 00	90 00	....
“ Maryland Institute......	....	18 00	18 00	18 00
Wholesale Produce............	....	4,000 00	4,000 00	4,000 00
“ Fish................	....	10,100 00	10,100 00	10,100 00
	....	....	$15,603 00	$15,168 00
Old material..................	....	....	....	22 75
Total..................	....	....	....	$15,190 75

Cross Street Market.

	Licenses	Rents	Total, '13	Total, '12
Butcher stalls.................	....	$119 75	$119 75	$710 00
Permanent and eave stalls.....	$895 00	2 50	897 50	827 50
Fish stalls.....................	70 00	32 50	102 50	170 00
Street stalls...................	730 00	....	730 00	650 00
Per diems......................	....	....	2,267 03	1,900 80
Old material..................	....	....	....	1 78
Total..................	....	....	$4,116 78	$4,260 08

Fell's Point Market.

	Licenses	Rents	Total, '13	Total, '12
Butcher stalls	$65 00	$480 00	$545 00	$1,800 00
Permanent and eave stalls	190 00	175 00	365 00	1,586 00
Space stalls	415 00	312 00	727 00	1,615 00
Movable stalls	40 00	8 00	48 00	339 00
Fish stalls	....	....	....	171 00
Street stalls	160 00	....	160 00	495 00
Storage rooms	....	....	....	30 00
Per diems	....	....	2,487 00	2,668 85
Total	....	....	$4,332 00	$8,704 85

Hanover Market.

	Licenses	Rents	Total, '13	Total, '12
Butcher stalls	....	$277 50	$227 50	$708 50
Permanent and eave stalls	$150 00	109 96	259 96	724 00
Fish stalls	....	5 66	5 66	95 00
Street stalls	25 00	....	25 00	210 00
Rent, Lankford & Meginnis, 10 stalls	....	140 00	140 00	....
Per diems	....	711 55	711 55	767 10
Total	....	....	$1,419 67	$2,504 60

Hollins Market.

	Licenses	Rents	Total, '13	Total, '12
Butcher stalls	$50 00	$195 00	$245 00	$709 00
Permanent and eave stalls	270 00	....	270 00	392 00
Space stalls	130 00	....	130 00	170 00
Movable stalls	10 00	....	10 00	25 00
End stalls	90 00	....	90 00	60 00
Fish stalls	20 00	....	20 00	38 00
Street stalls	866 66	....	866 66	1,063 00
Per diems	....	....	1,699 11	1,351 60
Old material	....	....	....	2 13
Total	....	....	$3,330 77	$3,810 73

Lafayette Market.

	Licenses	Rents	Total, '13	Total, '12
Butcher stalls	$20 00	$375 00	$395 00	$575 00
Permanent and eave stalls	470 00	120 00	590 00	980 00
End stalls	30 00	....	30 00	60 00
Space stalls	50 00	....	50 00	55 00
Street stalls	20 00	....	20 00	165 00
Per diems	....	....	1,448 20	1,397 30
Old material	....	....	....	1 86
Total	....	....	$2,533 20	$3,234 16

Lexington Market.

	Licenses	Rents	Total, '13	Total, '12
Butcher stalls	$10 00	$285 00	$295 00	$3,245 00
Permanent and eave stalls	1,395 00	879 00	2,274 00	3,569 00
Movable stalls	320 00	76 00	396 00	301 00
Fruit and vegetable stalls	....	....	....	653 00
Space stalls	170 00	109 00	279 00	....
Fish stalls	250 00	48 00	298 00	345 50
Street stalls	2,490 00	....	2,490 00	3,137 50
Per diems	....	....	7,867 45	6,819 60
Old material	....	....	....	12 00
Total	....	....	$13,899 45	$18,082 60

Northeast Market.

	Licenses	Rents	Total, '13	Total, '12
Butcher stalls	$80 00	$117 50	$197 50	$305 00
Permanent and eave stalls	270 00	267 50	537 50	399 00
Space stalls	970 00	264 00	1,234 00	880 50
End stalls	60 00	10 00	70 00	40 00
Fish stalls	40 00	8 00	48 00	28 00
Street stalls	....	....	....	5 00
Per diems	....	....	1,629 90	1,219 25
Old material	....	....	....	10 00
Total	....	....	$3,716 90	$2,886 75

Richmond Market.

	Licenses	Rents	Total, '13	Total, '12
Butcher stalls	$30 00	$151 50	$181 50	$627 75
Permanent and eave stalls	145 00	87 00	232 00	508 00
Aisle stalls	30 00	20 00	50 00	60 00
Movable stalls	20 00	2 00	22 00	36 00
Fish stalls	....	....	....	150 00
Space stalls	65 00	....	65 00	343 50
Street stalls	45 00	....	45 00	172 50
Restaurant	....	200 00	200 00	200 00
Per diems	....	....	1,208 80	1,716 85
Total	....	....	$2,004 30	$3,814 60

COMPARATIVE STATEMENT SHOWING RECEIPTS AND MISCELLANEOUS EXPENDITURES OF THE DIFFERENT MARKETS, YEARS 1912-1913 (42).

	1913		1912	
	Dr.	Cr.	Dr.	Cr.
Belair Market	$63 05	$8,636 55	$150 64	$11,073 96
Canton Market	20 55	418 50	16 75	427 70
Centre Market	1,786 22	1,503 00	3,690 07	1,090 75
Wholesale Produce	....	4,000 00	....	4,000 00
" Fish	....	10,100 00	....	10,100 00
Cross Street Market	26 57	4,116 78	82 72	4,260 08
Fell's Point Market	54 28	4,332 00	184 00	8,764 85
Hanover Market	45 97	1,419 67	31 50	2,504 60
Hollins Market	55 42	3,330 77	53 10	3,810 73
Lafayette Market	30 66	2,532 20	64 38	3,234 16
Lexington Market	298 39	13,899 45	493 72	18,082 60
Northeast Market	21 35	3,716 90	34 02	2,886 75
Richmond Market	90 54	2,004 30	90 83	3,814 60
Gross	$2,493 00	$60,011 12	$4,891 73	$74,050 78
Exp. (brooms, fuel light, etc.)	....	2,493 00	....	4,891 73
Net receipts	....	$57,518 12	....	$69,159 05

NOTE 1—The large deficit of 1913 is due to non-payment of licenses, rents and per diems pending contest by the market people of the validity of Ordinance No. 332, approved July 25, 1913, making changes in the market rates and regulations.

NOTE 2—Case decided in the city's favor by the Court of Appeals, May 6, 1914.

STATEMENT OF RECEIPTS FROM MARKET PER DIEMS FOR YEAR 1913, WITH COMPARISON OF THE TOTAL RECEIPTS FROM PER DIEMS, BY YEARS, FROM 1908 (42).

1913.	Belair.	Canton.	Cross St.	Fell's Pt.	Hanover.	Hollins.	Lafayette.	Lexington.	Richmond.	Northeast.	Total.
January.	$283 90	$12 30	$162 90	$244 05	$63 90	$107 70	$125 05	$666 35	$155 15	$96 90	$1,918 20
February......	266 90	7 70	139 90	226 25	61 40	83 00	123 70	629 35	140 55	89 40	1,768 15
March.........	241 40	8 60	132 50	206 10	54 70	83 10	111 05	555 85	125 60	82 30	1,601 20
April..........	281 00	10 60	156 00	236 90	62 20	100 50	132 60	643 65	141 80	98 45	1,862 80
May...........	281 25	11 20	153 40	236 10	60 40	105 60	134 10	618 85	131 40	98 05	1,830 35
June..........	288 80	14 60	180 50	254 60	62 80	124 80	156 90	607 10	120 15	118 35	1,928 60
July...........	228 05	12 00	151 50	213 80	62 00	112 60	134 05	516 90	107 15	99 70	1,637 75
August........	701 50	51 50	835 95	384 10	183 40	466 80	337 50	1,494 90	166 00	519 75	5,141 40
September.....	1,071 25	39 00	186 88	319 75	51 50	366 01	114 50	1,355 50	71 50	272 00	3,847 89
October........	208 00	....	70 00	87 00	21 75	86 00	34 50	395 75	29 25	62 00	994 25
November.....	268 00	....	84 00	35 75	26 50	63 00	44 25	335 75	20 25	63 00	940 50
December.....	67 50	8 00	13 50	43 50	1 00	....	....	47 50	....	30 00	211 00
Total........	$4,187 55	$175 50	$2,267 03	$2,487 00	$711 55	$1,699 11	$1,448 20	$7,867 45	$1,208 80	$1,629 90	$23,682 09
1912...........	$3,393 20	$147 70	$1,900 80	$2,668 85	$767 10	$1,351 60	$1,397 30	$6,819 60	$1,219 25	$1,716 85	$21,382 25
1911...........	3,815 90	156 80	1,922 20	2,759 60	785 50	1,329 00	1,421 65	6,475 90	1,245 90	1,710 05	22,622 50
1910...........	4,168 95	170 25	1,969 10	2 792 15	805 10	1,335 20	1,443 20	6,495 40	1,317 65	1,737 35	22,234 35
1909...........	4,331 64	222 65	1,962 30	2,943 85	862 90	1,362 20	1,479 20	6,658 00	1,337 90	1,756 65	22,917 29
1908...........	4,362 35	222 10	1,917 60	2,803 95	916 00	1,349 80	1,482 40	6,682 30	1,262 95	1,762 70	22,762 15

HOSE FOR VARIOUS MARKETS (42).

Appropriation		$600 00

EXPENDITURES.

Belair Market	$47 00	
Centre Market	103 25	
Cross Street Market	118 67	
Fell's Point Market	68 00	
Hollins Market	68 00	
Lexington Market	136 00	
		540 92
Balance to Surplus 1913		$59 08

MARKET HALL RENTALS (42).

Cross Street Market Hall.

	1913		1912	
	Dr.	Cr.	Dr.	Cr.
By rents	....	$172 00	....	$188 00
Cleaning, fuel, lights, etc	$185 23	....	$318 83	....
Net loss	....	*13 23	....	130 83
	$185 23	$185 23	$318 83	$318 83

*Charged to Surplus 1913.

Hollins Market Hall.

Occupied by Boys' Brigade.

Richmond Market Hall.

Occupied by Naval Reserves.

Broadway Market Hall.

Occupied by Board of School Commissioners.

SUMMARY OF DEBITS AND CREDITS OF MARKETS (1857-1913, INCLUSIVE),

(For historical and financial data of the

Markets.	Debits.					
	Cost of Ground.	Cost of Structure.	Ground Rents. (*c*)	Salaries of Clerks or Assistant Market Masters.	Salaries of Cleaners or Market Employes.	Hose.
Centre	$161,223 83	$533,799 83		$66,849 52	$36,781 00	$1,053 36
Fell's Point.	Donated.	62,871 96		40,750 00	22,860 00	920 85
Lexington ..	21,800 00	56,387 13	$25,080 00	44,850 00	32,179 35	1,253 12
Belair	35,088 33	19,260 45		38,750 00	23,420 00	490 50
Richmond ..	71,778 73	116,402 94		21,900 00	15,555 00	653 20
Cross Street.	8,116 67	56,106 52	67,196 00	34,149 75	12,302 40	629 37
Hanover	8,016 27	25,001 43		25,300 00	18,602 00	635 55
Hollins	Donated.	29,871 16		25,050 00	13,418 68	631 45
Lafayette ...	28,993 24	31,137 15		15,900 00	9,915 00	468 25
Northeast ..	20,000 00	19,472 93	40,800 00	11,599 96	1,725 00	175 10
Canton	Donated.	8,613 15		11,999 57	2,145 20	212 55
Misc. (*d*)....						
Totals.....	$355,017 07	$958,924 65	$133,076 00	$337,098 80	$188,903 63	$7,123 30
Market halls.						

(*a*) This statement, together with the historical and financial data pertaining to the municipal markets in Baltimore, appeared for the first time in the Comptroller's 1911 report. It is compiled from the financial records available and is as near correct as could be expected; the financial reports of the city have only in recent years been compiled in a uniform manner.

ALSO INCLUDING OTHER ASCERTAINABLE ITEMS PRIOR TO 1857 (*a-b*) (42).

markets see Comptroller's report for 1911.)

Debits.			Credits.		
Misc. Expenses.	Repairs and Impts.	Totals.	Licenses, Rents and Per Diems.	Sale of Stalls.	Totals.
$61,124 28	$26,346 64	$887,178 46	$511,358 44	....	$511,358 44
28,960 29	56,137 79	212,500 89	353,887 51	$38,865 80	392,753 31
40,588 79	40,804 93	262,943 32	734,324 05	29,826 63	764,150 68
33,580 18	55,765 93	206 355 39	510,063 93	28,190 22	538,254 15
18,202 17	24,533 40	269,025 44	162,249 89	73,282 05	235,531 94
18,227 32	25,904 69	222,632 72	168,984 10	37,510 12	206 494 22
30,552 24	14,055 28	122,162 77	274,205 22	2,082 17	276,287 39
22,164 91	8,375 78	99,511 98	169,419 61	12,386 39	181,806 00
9,451 44	19,914 38	115,779 46	76,511 35	49,564 10	126,075 45
7,510 37	8,781 19	110,064 55	65,171 38	6,196 00	71,367 38
4,655 95	3,050 77	30,677 19	13,788 52	1,615 00	15,403 52
....	....	....	....	22,488 14	22,488 14
$275,017 94	$283,670 78	$2,538,832 17	$3,039,964 00	$302,006 62	$3,341,970 62
$18,445 85	....	$18,445 85	$28,876 94	....	$28,876 94

(*b*) Does not include expense of administration or for cleaning and lighting the markets.

(*c*) Ground rents owned by the Commissioners of Finance of Baltimore city.

(*d*) Miscellaneous includes sales of stalls not segregated, viz.: 1857, $14,287.26; 1858, 5.924.75; 1859, $782.40; 1860, $1,493.73; total, $22,488.14.

WHARVES AND DOCKS A—VI (43).

DREDGING HARBOR (43).

Appropriation		$55,277 00	
Refund, account anchorage buoys		5 00	
Received from sale of calcium hypochlorite		260 00	
Received for private dredging		602 55	
			$56,144 55

EXPENDITURES.

Maryland Dredging and Contracting Company		$39,522 63	
Advertising		20 42	
Supervision of dredging		3,131 26	
Surveys		3,991 48	
Anchorage buoys		47 90	
Department launch		11 39	
National Association of Port Authorities		50 00	
Trip to Convention of Nat. Assoc. Port Authorities		156 60	
Printing "Harbor Laws" (one-third paid by Comptroller)		154 44	
Harbor odors		275 75	
Tug "Baltimore"- -			
Crew	$5,485 83		
Fuel	727 56		
Repairs	1,674 06		
Supplies	768 55		
Subsistence	10 67		
Uniforms	106 00		
Boat	10 00		
		8,782 67	
			56,144 54
Balance to Surplus 1914			$ 01

ICEBOATS (43).

Appropriation	$23,430 00	
Received from State of Maryland	5,000 00	
Received for use of iceboat	48 00	
		$28,478 00

EXPENDITURES.

	"Annapolis."	*"Latrobe."*	
Advertising	$12 02	$12 03	
Crew	5,000 85	8,010 35	
Fuel	263 00	503 50	
Supplies	889 64	1,213 36	
Repairs	4,407 10	3,713 01	
Telephone	35 73	35 72	
	$10,608 34	$13,487 97	
			24,096 31
Balance to Surplus 1913			$4,381 69

REPAIRS OF WHARVES (43).

Appropriation	$7,300 00	
Received for hire of derrick scow	711 75	
Transferred from Commissioner of Street Cleaning for Repairs to garbage dump, Centre Pier	1,068 00	
		$9,079 75

EXPENDITURES.

Launch "Julia"	$756 82	
Department shed	186 42	
Miscellaneous	198 71	
Pier 5, Pratt street	117 10	
" 7, President street	331 24	
" 8, Albemarle street	515 38	
Driveway, Pier 8	1,435 84	
Repairs to Centre Pier	1,396 95	
Garbage dump, Centre Pier	1,068 00	
Grading and Paving Centre Pier	1,572 65	
Supervision	1,500 00	
		9,079 11
Balance to Surplus 1913		$ 64

REMOVAL OF ASHES (43).

Appropriation		$1,100 00

EXPENDITURES.

Supplies	$14 50	
Supervision	600 00	
		614 50
Balance to Surplus 1913		$485 50

REMOVAL OF FLOATING MATTER (43).

Appropriation		$1,935 00

EXPENDITURES.

Salaries	$1,650 50	
Outfit	123 92	
		1,774 42
Balance to Surplus 1913		$160 58

RENTS FROM CITY DOCKS AND PIERS (43).

RECEIPTS.

B., C. & A. Ry. Co., west half Pier No. 1 (Ord. No. 124, 1908)	$16,097 60
B. & P. Steamboat Co., Light and Pratt Sts. (Ord. No. 105, 1908)	10,000 00
Lanasa & Goffe Steamship & Imp. Co., part Pier 4 (Ord. No. 127, 1908)	9,336 24
Arundel Sand & Gravel Co., portion Pier 2 (Ord. No. 407, 1909)	7,158 24
Baltimore Steam Packet Co., space on Pier 5 (Ord. No. 455, 1910), and wharves foot of Barre St. (Ord. No. 367, 1913)	19,468 42
Standard Oil Co., part western half Pier 2 (Ord. 126, 1908, and Ord. No. 330, 1909)	4,321 96
Martin Wagner Co., part Pier 2 (Ord. 203, 1908)	2,910 20
Balto. & Caro. S. S. Co., space on Pier 2 (Board of Est., May 13, 1913)	2,750 00
United Fruit Co., east half Pier 1 (Ord. No. 134, 1908)	15,071 04
M. & M. Trans. Co., Pier 3, Pratt St. Whf. (Ord. No. 282, 1907)	30,000 00
Atlantic Fruit Co., portion Pier 2 (Ord. No. 169, 1908)	9,665 48
Davison Chemical Co., docking privileges, pier foot Calvert St.	50 00
Clarence Cottman, docking privileges, pier foot Calvert St.	50 00
Skinner Shipbuilding & Dry Dock Co., docking priv., pier ft. Calvert St.	50 00
J. P. Morgan, yacht, docking privileges, pier ft. Calvert St.	5 00
J. B. Fluskey, office on Pier 4	72 00
John C. Bosley, Steamer "Dreamland" (docking)	1,000 00
	$128,006 18

EXPENDITURES.

Commis. on coll'c'n from Str. "Dreamland" allowed Asst. Harbor Master	200 00
Paid into city treasury	$127,806 18

RECEIPTS FROM WHARFAGE FOR THE YEAR ENDED DECEMBER 31, 1913 (43).

Months.	1st District.	2nd District.	3rd District.	4th District.	5th District.	Total.
January	$292 10	$1,104 39	....	$166 66	$2,738 68	$4,301 83
February	164 00	927 55	....	166 66	3,100 88	4,359 09
March	166 25	959 40	....	166 66	2,478 39	3,770 70
April	211 70	1,111 74	....	166 66	3,467 74	4,957 84
May	186 49	914 78	....	194 48	3,330 94	4,626 69
June	201 50	931 94	....	166 66	3,114 01	4,414 11
July	144 50	715 19	....	168 66	3,756 61	4,833 29
August	153 75	826 68	$2,157 19	166 63	1,778 56	5,082 84
September	242 00	1,128 54	2,102 52	10 00	1,818 72	5,301 78
October	295 75	927 16	2,028 02	10 00	1,719 67	4,980 60
November	221 50	755 46	1,834 13	176 66	1,664 39	4,652 14
December	183 25	724 81	1,425 64	40 00	1,563 44	3,937 14
Total 1913	$2,462 79	$11,027 64	$9,547 50	$1,699 76	$30,532 03	$55,169 72
Total 1912	$3,053 81	$13,106 56	....	$2,132 95	$30,014 47	$48,307 79

Gross receipts, 1913		$55,169 72

EXPENDITURES.

*Commissions paid assistant harbor masters	$11,091 01	
Amount paid Consol. Gas. Electric Light & Power Co.	44 95	
Amount paid Meyer & Thalheimer, printing	77 21	
Total expenditures		11,213 17
Net receipts, 1913		$43,956 55
Net receipts, 1912		38,587 67
Net increase of 1913 over 1912		$5,368 88

ASSISTANT HARBOR MASTERS.

Michael Feller	First District.
George J. Mueller	Second District.
Jesse F. Hall	Third District.
William Durm	Fourth District.
Robert Snyder	Fifth District.

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*In addition to above, $200 commission was allowed Assistant Harbor Masters account rental by Steamer "Dreamland," credited to Rentals Public Wharves and Docks.

HARBOR BOARD REVENUE (43).

Received from sale of old material	$88 47
Paid into city treasury	88 47

PUBLIC WHARVES AND DOCKS (43).

Appropriation	$19,068 00

EXPENDITURES.

	Pratt Street.	*Recreation Pier.*	*South Side Harbor.*	
Engineers	$1,156 50	$3,855 83	$2,185 01	
Draughtsmen	82 50	1,299 50	74 50	
Rodmen	215 00	1,094 00	528 25	
Inspectors	395 00	1,560 00	1,479 00	
Asst. Clerk and Stenographer	216 00	432 00	432 00	
Watchman	126 40	252 80	252 80	
Timekeeper	216 45	428 40	428 40	
Launch "Major"	126 20	252 40	252 40	
Supervision of dredging	....	926 00	....	
	$2,534 05	$10,100 93	$5,632 36	
				$18,267 34
Balance to Burnt District 1960 Loan				$800 66

COMMERCIAL AND RECREATION PIER (43).

Balance brought forward from 1912	$308,323 52	
Unexpended balance from 1912 appropriation	150,000 00	
Refund by William L. Miller and Luke D. Mullen	11,462 19	
		$469,785 71

EXPENDITURES.

Engineering supplies	$779 43	
Office expenses	302 02	
Launch "Major"	314 38	
Advertising	138 14	
Maryland Dredging and Contracting Company	42,083 29	
William L. Miller and Luke D. Mullen	149,175 48	
Advance to William L. Miller and Luke D. Mullen	11,293 19	
Singer-Pentz Company (Recreation Pier)	42,210 00	
Architect	5,000 00	
Concrete float	494 93	
Property acquired	3,939 47	
Examination of titles	162 40	
Recording deeds	5 75	
Miscellaneous	169 00	
		256,067 48
Balance carried forward to 1914		$213,718 23

PROPERTY AND PIER, SOUTH SIDE HARBOR (43).

Balance brought forward from 1912	$633,414 97	
Received for rent	2,313 26	
Received from sale of buildings	1,265 60	
Forfeited for plans	10 00	
		$637,003 83

EXPENDITURES.

Engineering supplies	$1,129 32	
Office expenses	182 72	
Launch "Major"	324 36	
Advertising	117 51	
Establishing grades	204 01	
Consolidated Engineering Company	26,701 47	
M. J. Beach	3,194 79	
R. C. Hoffman & Co., rails	8,683 04	
Paving	557 48	
Property acquired	81,547 66	
Repairs to property	409 50	
Examination of titles	2,255 25	
Recording deeds	111 75	
Taxes	1,442 10	
Water rents	90 77	
Ground rents	770 50	
		127,722 23
Balance carried forward to 1914		$509,281 60

SUBWAYS FOR PIPES AND WIRES A—VI (44).

ELECTRICAL COMMISSION (44).

Construction Salaries, appropriation		$17,200 00
EXPENDITURES.		
Chief Engineer, R. C. Thomas	$2,000 00	
Assistant Engineer, G. E. A. Fairley	2,301 74	
Superintendent of Construction, G. J. Lyons	2,400 00	
Assistant Supt. of Construction, E. F. Beauchamp	1,595 84	
General Foreman, Charles Carroll	755 84	
" " Peter Fallon	813 34	
Chief Clerk, J. W. Nicol, Jr.	1,500 00	
Paymaster, W. A. Mentzel	1,495 83	
Assistant Paymaster, J. W. Thompson	1,200 00	
Chief Draughtsman, C. H. Kratz	1,200 00	
" Cable Inspector, G. F. Wennagel	797 90	
		16,060 49
Balance to Conduit 1962 Loan		$1,139 51

Construction Expenses, appropriation	$500,000 00	
Special connections, wages returned and sale of material	14,589 20	
		$514,589 20
EXPENDITURES.		
Advertising	$186 76	
Bricks	6,961 77	
Burlaps	2,038 99	
Car fare	1,370 27	
Castings	8,529 71	
Cement	20,184 79	
Drawing material	614 31	
Freight and hauling	6,529 73	
Fibre conduit	13,431 75	
Premiums on bonds	137 50	
Lumber	4,937 41	
Office supplies, printing, stationery and telephone	1,310 04	
Paving	9,390 09	
Rental of store yard	120 00	
Professional services	1,168 90	
Rebates, deposits on house connections	83 98	
Repairs, tools and miscellaneous supplies	3,243 91	
Sand and gravel	26,574 92	
Stone	7 50	
Store yard material	8,101 91	
Terra cotta conduit	46,477 92	
Labor	342,075 18	
		503,477 34
Balance to Conduit 1962 Loan		$11,111 86

OPERATING AND MAINTENANCE OF CONDUITS COMPLETED (44).

Appropriation		$10,700 00
EXPENDITURES.		
Chief Engineer, R. C. Thomas	$2,000 00	
Chief Cable Inspector, G. F. Wennagel	797 90	
Hire of horse	354 00	
Labor	7,548 00	
		10,699 90
Balances to Surplus 1913		$ 10

RENTAL OF SUBWAYS (44).

Received from:

American Tobacco Company	$3 48
Baltimore and Ohio Railroad Company	1,872 91
Baltimore Bargain House	211 30
Baltimore Electric Light and Power Company	98 10
Baltimore National Automatic Fire Alarm Company	1,158 86
Chesapeake and Potomac Telephone Company	300 28
Amount carried forward	$3,644 93

Amount brought forward	$3,644 93
Consolidated Gas Electric Light and Power Company	74,941 49
Crown Cork and Seal Company	50 00
Holmes Electric Protective Company	629 36
Maryland Telephone Company	4,745 47
Merchants and Miners Transportation Company	23 92
Monticello Distilling Company	5 02
Northern Central Railway Company	374 98
Philadelphia, Baltimore and Washington Railroad Company	337 87
Postal Telegraph-Cable Company	1,609 85
Swift & Co.	63 14
United Railways and Electric Company	28,539 67
United States of America	77 97
University of Maryland	37 36
Washington, Baltimore and Annapolis Electric Railroad Company	699 56
Western Union Telegraph Company	5,019 87
Paid into city treasury	$120,800 46

FRANCHISE—TELEPHONE CONDUITS (44).

Received from Chesapeake and Potomac Telephone Company	$41,301 27
Paid into city treasury	41,301 27

MISCELLANEOUS A—VI (45).

TURNPIKE DIVIDENDS (45).

Received from Baltimore and Reisterstown Turnpike Company	$116 27
Paid into city treasury	116 27

6. PUBLIC EDUCATION, RECREATION AND ART

SCHOOLS A—VI (46).

OFFICE (46).

Salaries, appropriation		$9,200 00

EXPENDITURES.

Secretary, John H. Roche	$2,400 00	
First Asst. Secretary, F. N. Claridge	1,800 00	
Second Asst. Secretary, J. R. Jolly	1,620 00	
Clerk to Secretary, Wm. H. Barton, Jr.	720 00	
Supervisor of School Buildings, Henry R. Davis	2,000 00	
Janitor, Oscar Weems	660 00	
		9,200 00

Expenses, appropriation	$1,500 00

EXPENDITURES.

Blank books, stationery and supplies	1,500 00

DAY SCHOOLS (46).

Salaries, appropriation	$1,617,123 00	
Refund	65 33	
		$1,617,188 33

EXPENDITURES.

Superintendent	$5,000 00	
Asst. Superintendent	3,200 00	
" "	2,700 00	
4 Asst. Superintendents	10,000 00	
4 Clerks in Superintendent's office	2,585 00	
Clerk in Superintendent's office	660 00	
Statistician	1,200 00	
Supervisor of Manual Training and Teacher	2,091 25	
" " Music	1,446 25	
Amounts carried forward	$28,882 50	$1,617,188 33

Amounts brought forward		$28,882 50	$1,617,188 33
Asst. Supervisor of Music		867 00	
" " " "	$597 00		
" " " " (part time)	31 50		
" " " " " "	36 00		
		664 50	
" " " " " "	$133 32		
" " " " " "	305 23		
		438 55	
Supervisor of Drawing		1,200 00	
" " Sewing		899 00	
" " Manual Training		1,500 00	
Chief Attendance Officer		832 50	
11 Asst. Attendance Officers		8,071 87	
Occasional and emergency substitutes		32,734 20	
Baltimore City College:			
Principal	$2,995 00		
Vice-Principal	2,200 00		
33 Teachers	51,227 26		
Librarian	700 00		
Clerk	720 00		
Theme Reader	300 00		
		58,142 26	
Eastern High School:			
Principal	$2,600 00		
Vice-Principal	1,300 00		
35 Teachers	34,613 20		
Librarian	600 00		
Clerk	499 92		
Theme Reader	225 00		
		39,838 12	
Western High School:			
Principal	$2,591 34		
Vice-Principal (part of year)	431 16		
44 Teachers	47,098 40		
Librarian	332 00		
Clerk	500 00		
		50,952 90	
Baltimore Polytechnic Institute:			
Principal	$2,965 00		
Vice-Principal	2,200 00		
54 Teachers	64,482 75		
Clerk	720 00		
		70,367 75	
Colored High School:			
Principal	$2,400 00		
Vice-Principal	1,600 00		
29 Teachers	26,205 41		
Clerk	596 00		
		30,801 41	
Training School (White):			
Principal	$3,000 00		
7 Teachers	7,825 28		
Librarian	499 92		
Clerk	499 92		
		11,825 12	
Training School (Colored):			
Principal	$2,400 00		
5 Teachers	4,485 57		
Clerk	372 00		
		7,257 57	
Elementary Schools:			
1,628 Teachers, including principals and vice-principals		1,134,812 05	
Normal extension		469 00	
358 Engineers, janitors, firemen and janitresses in high, normal and elementary schools		136,230 43	
			1,616,786 73
Balance to Surplus 1913			$401 60

DAY SCHOOLS (46).

Expenses, appropriation		$160,650 00

EXPENDITURES.

Rent	$8,321 00	
Stationery and classroom supplies	26,988 50	
Janitors' supplies, advertising, commencements, gas, electric power, etc	16,709 24	
Rent of telephones	1,860 85	
Cooking supplies	3,371 27	
Manual training supplies	2,149 88	
Fuel	65,064 74	
Weighing coal and inspecting fuel	457 60	
Engineers' supplies	364 20	
Hauling	2,795 05	
Repairs to desks and furniture	11,948 16	
" and renewing window shades	1,032 47	
" " " plumbing, gas and elec. fixt'rs.	4,320 83	
" " tuning pianos	87 95	
" to stoves	939 17	
" " electric bells	794 13	
Rearranging classrooms	1,642 23	
New furniture in old buildings	5,399 98	
" blackboards	1,324 63	
Manual training and cooking equipment	2,133 37	
Repairs and renewing in general	2,944 75	
		160,650 00

NIGHT SCHOOLS (46).

Salaries, appropriation		$21,321 00

EXPENDITURES.

16 Principals	$2,847 00	
145 Assistants	15,385 40	
12 " in cookery classes	1,515 00	
40 Janitors and firemen	1,567 90	
		21,315 30
Balance to Surplus 1913		$5 70

Expenses, appropriation		$4,500 00

EXPENDITURES.

Stationery and classroom supplies	$793 66	
Provisions	388 68	
Light and power	1,300 00	
Material for sewing classes	438 02	
" " manual training classes	327 36	
Repairs to gas and electric fixtures	511 42	
" " stoves	364 45	
Incidentals	376 41	
		4,500 00

PARENTAL SCHOOL (46).

Appropriation		$7,000 00

EXPENDITURES.

Salaries	$3,541 60	
Provisions	1,870 73	
Fuel	157 87	
Light	48 46	
Laundry	302 08	
Rent	450 00	
Horse, wagon and harness	245 00	
Gas and electric fixtures	83 59	
Furniture	225 25	
Incidentals	75 42	
		7,000 00

TEACHERS' RETIREMENT FUND (46).

Appropriation	$9,100 00

EXPENDITURES.

Paid treasurer of Teachers' Retirement Fund	9,100 00

EQUIPPING NEW SCHOOL BUILDINGS (46).

Appropriation	$21,250 00	
Brought forward from 1912	17,415 49	
		$38,665 49

EXPENDITURES.

Desks and furniture	$29,154 48	
Blackboards, mouldings, etc	2,925 07	
Pianos	725 00	
Gas and electric fixtures	924 22	
Manual training equipment	1,653 69	
Window shades	1,678 00	
Cooking equipment	207 30	
Blackboard moulding, etc	780 76	
Carpets	407 72	
Incidentals	209 25	
		38,665 49

STATE HIGH SCHOOL FUND (46).

Balance brought forward from 1912	$2,754 33	
Received from the State of Maryland	10,000 00	
		$12,754 33

EXPENDITURES.

Stationery and classroom supplies	$9,163 64	
Cooking equipment	528 47	
Janitors' supplies	59 71	
Manual training supplies	351 85	
" " apparatus	80 52	
" " equipment	273 06	
Printing	33 27	
Repairs to desks and furniture	132 00	
" " electric bells	3 47	
" " furniture	141 92	
" " electric fixtures	264 17	
Other repairs	213 40	
Sewing supplies	56 35	
Typewriters	234 00	
Books	186 55	
Incidentals	1,031 95	
		12,754 33

IMPROVED DRINKING FOUNTAINS (46).

Balance brought forward from 1912	$804 17

EXPENDITURES.

Installing drinking fountains in schools	759 60
Balance to Surplus 1913	$44 57

CONDUCTING VACATION CLASSES (46).

Appropriation	$6,000 00

EXPENDITURES.

Salaries	$4,683 00	
Repairs to gas and electric fixtures	34 79	
Stationery and supplies	97 19	
Sewing material	29 35	
Type	486 51	
Hardware, tools, etc	237 11	
Incidentals	432 05	
		6,000 00

FREE TEXT-BOOKS (46).

Received from State of Maryland	$54,976 82	
" " exchange and sale of old books	2,194 94	
		$57,171 76
Expenditures for text-books		56,251 22
Balance carried forward to 1914		$920 54

ADDITIONAL GROUND FOR SCHOOL No. 27 (46).

Appropriation	$3,303 89	
Balance brought forward from 1912	8,696 11	
		$12,000 00
Expended for property		11,489 47
Balance to Surplus 1913		$510 53

VACUUM CLEANING APPARATUS (46).

Balance brought forward from 1912	$3,000 00
No expenditures—Balance carried forward to 1914	3,000 00

IMPROVED HEATING AND VENTILATION (46).

(Schools Nos. 75, 12 and 8.)

Appropriation		$5,000 00

EXPENDITURES.

Advertising	$26 29	
Wanner Steam-Hot Water Heating Co	4,973 71	
		5,000 00

PUBLIC SCHOOL FUND (46).

Received from State of Maryland	$515,361 91
Paid into city treasury	515,361 91

TUITION FEES (46).

Received from non-resident pupils	$17,334 63
Refunds	86 81
Paid into city treasury	$17,247 82

INTESTATE ESTATES (46).

Balance brought forward from 1912	$10,868 75	
Received during 1913	66 24	
		$10,934 99

EXPENDITURES.

Cooking supplies	$53 04	
Fuel	84 32	
Laboratory supplies	166 09	
Manual training supplies	145 00	
Repairs to furniture	1,774 17	
		2,222 62
Balance carried forward to 1914		$8,712 37

SCHOOL AND LOT FOR NEW PARENTAL SCHOOL (46).

Appropriation	$5,000 00	
Balance brought forward from 1912	7,887 74	
Transferred from Contingent Fund	2,000 00	
		$14,887 74

EXPENDITURES.

Property acquired near Irvington and miscellaneous	11,649 30
Balance carried forward to 1914	$3,238 44

NEW ADDITION TO SCHOOL No. 50 (46).

Appropriation	$5,000 00
Property acquired	4,392 20
Balance carried forward to 1914	$607 80

PLAYGROUND AND OPEN-AIR CLASSROOM, SCHOOL No. 76 (46.)

Appropriation	$7,500 00
No expenditures—Balance carried forward to 1914	7,500 00

ADDITIONAL YARD SPACE, SCHOOL No. 106 (46).

Appropriation	$4,000 00
No expenditures—Balance carried forward to 1914	4,000 00

LOT AND BUILDING, NEW POLYTECHNIC INSTITUTE (46).

Appropriation	$264,000 00	
Balance brought forward from 1912	58,316 73	
		$322,316 73

EXPENDITURES.

Topographical Survey Commission, blue prints	$131 89	
Water Department, labor	503 23	
Advertising	168 96	
City Engineer's Department, paving	1,821 06	
Electrical Commission, electric work	342 01	
C. E. Conway, superintendent	400 00	
Williams & Strauss, excavating	295 22	
J. J. King, painting	464 00	
J. S. Busick, carpentry	1,378 51	
Merritt & Co., lockers	2,167 50	
Wilson-Maltman Co., electric equipment	81,505 49	
C. L. Stockhausen, builder	201,014 56	
Miscellaneous	220 05	
		290,512 48
Balance carried forward to 1914		$31,804 25

LOT AND BUILDING, SCHOOL No. 22 (46).

Appropriation	$15,000 00	
Balance brought forward from 1912	137,596 60	
Transferred from Contingent Fund	963 39	
		$153,559 99

EXPENDITURES.

Property	$708 09	
A. C. Leach, architect's commission	2,463 39	
Singer-Pentz Co., builder	150,376 21	
Miscellaneous	12 40	
		153,559 99

PURCHASE OF LOT AND ERECTION OF BUILDING VICINITY OF BELVIEU AVENUE (46).

Appropriation	$10,000 00	
Balance brought forward from 1912	38,456 03	
		$48,456 03
Expended		12 50
Balance carried forward to 1914		$48,443 53

LOT AND BUILDING, SCHOOL No. 51 (46).

Balance brought forward from 1912	$10,615 81

EXPENDITURES.

Austin-Humphreys Co., grading	4,058 00
Balance to Surplus 1913	$6,557 81

LOT AND BUILDING, SCHOOL No. 59 (46).

Balance brought forward from 1912		$15,674 29
EXPENDITURES.		
Advertising and blue prints	$31 90	
D. M. Andrews Co., cement work	3,464 00	
		3,495 90
Balance to Surplus 1913		$12,178 39

LOT AND BUILDING, SCHOOL No. 6 (46).

Balance brought forward from 1912		$103,871 10
EXPENDITURES.		
Bennett Building Co., building	$94,541 43	
F. E. & H. R. Davis, architect's commission	1,844 66	
Wansch & Dobos, iron work	618 00	
Baltimore Gas Light Co., fixtures	388 83	
Miscellaneous	166 77	
		97,559 69
Balance carried forward to 1914		$6,311 41

LOT AND BUILDING, SCHOOL No. 27 (46).

Balance brought forward from 1912		$117,622 60
EXPENDITURES.		
Water and blue prints	$88 59	
Baltimore Gas Light Co., fixtures	383 06	
P. J. Cushen, building	101,073 10	
		101,544 75
Balance carried forward to 1914		$16,077 85

ADDITION TO SCHOOL No. 83 (46).

Balance brought forward from 1912		$99,945 42
EXPENDITURES.		
Topographical Survey Commission, blue prints	$214 45	
Advertising	47 54	
Haskell & Barnes, architect's commission	2,483 51	
J. K. McIver, building	11,999 14	
Maryland Casualty Co., surety on contractor's bond, completion of building	24,488 97	
		39,233 61
Balance carried forward to 1914		$60,711 81

ADDITION TO SCHOOL No. 99 (46).

Balance brought forward from 1912	$55,944 48	
Transferred from Contingent Fund	400 00	
		$56,344 48
EXPENDITURES.		
Topographical Survey Commission, blue prints	$73 78	
Advertising	24 29	
H. A. Sill, architect's commission	2,384 82	
Baltimore Gas Light Co., fixtures	47 79	
National Window Cleaning Co., cleaning	34 30	
Singer-Pentz Co., building	53,779 50	
		56,344 48

LOT, SCHOOL No. 99 (46).

Balance brought forward from 1912	$5,070 13
No expenditures—Balance carried forward to 1914	5,070 13

LOT AND BUILDING, SCHOOLS No. 101, 111 AND 111 ANNEX (46).

Balance brought forward from 1912	$120,000 00
EXPENDITURES.	
Property acquired	4,186 37
Balance carried forward to 1914	$115,813 63

MARYLAND SCHOOL FOR THE BLIND (46).

Appropriation	$75,116 66	
Transferred from Contingent Fund	14 59	
		$75,131 25
Paid Maryland School for the Blind fourth and final note and interest, account purchase of property for new Polytechnic Institute		75,131 25

NOTE—It was stated in error (page 276, Comptroller's 1912 report) that the payment in 1912 of $75,218.75 was the fourth and final payment; that was the third payment.

ADDITION TO SCHOOL No. 67 (46).

Balance brought forward from 1912	$66,950 00
No expenditures—Balance carried forward to 1914	66,950 00

LOT AND BUILDING, SCHOOL No. 61 (46).

Balance brought forward from 1912	$75,000 00
No expenditures—Balance carried forward to 1914	75,000 00

ADDITION TO SCHOOL No. 34 (46).

Balance brought forward from 1912	$25,000 00
No expenditures—Balance carried forward to 1914	25,000 00

LOT NEAR SYCAMORE AND THIRD AVENUES (46).

Balance brought forward from 1912	$6,000 00
No expenditures—Balance carried forward to 1914	6,000 00

LOT, SCHOOL No. 68 (46).

Balance brought forward from 1912	$2,334 35
No expenditures—Balance carried forward to 1914	2,334 35

LIBRARIES A—VI (47).

ENOCH PRATT FREE LIBRARY FUND (47).

Appropriation	$4,258 00
Paid Commissioners of Finance, account deficit in income	4,258 00

ENOCH PRATT FREE LIBRARY (47).

Equipment and maintenance, appropriation	$36,500 00
Paid Enoch Pratt Free Library	36,500 00

PARKS A—VI (48).

BOARD OF PARK COMMISSIONERS (48).

Salaries, appropriation		$5,288 00
EXPENDITURES.		
Secretary-Treasurer, J. V. Kelly	$1,800 00	
Assistant to Secretary, Clark Kerr	1,091 59	
Clerk, Helen M. Spangler	871 63	
" Margaret M. Hanson	624 00	
" Bertha H. Pfeiffer	624 00	
Boy, W. Howard Austin	255 59	
		5,266 81
Balance to Surplus 1913		$21 19

Expenses, appropriation		$2,000 00

EXPENDITURES.

Postage	$229 94	
Stationery and printing	793 44	
Advertising	346 10	
Telephone service	337 99	
Miscellaneous	144 66	
		1,912 13
Balance to Surplus 1913		$87 87

Salaries, Parks and Squares, appropriation		$245,549 50

EXPENDITURES.

Administration, parks (see Note 1)	$4,836 95	
Superintending, parks (see Note 2)	8,150 42	
Conservatory, greenhouse and nursery	13,034 71	
Outdoor gardening and forestry	34,244 57	
Lawns and fields	43,613 07	
Roads, drives and gutters	17,900 25	
Paths, walks, steps and benches	11,765 98	
Athletic fields and playgrounds	10,000 99	
Buildings, pavilions and toilets	14,182 01	
Policing and gatekeeping	33,520 97	
Live stock, stable work	5,401 09	
Zoological collection	4,678 85	
Fountains, springs and pumps	544 94	
Lakes and ponds	291 50	
Quarry	7,432 69	
Repair shop and shoeing	2,790 52	
General work, unclassified	12,764 59	
Monuments	823 21	
Automobile (auto truck, see "lawns and fields")	1,312 50	
Electric lighting	2,117 83	
Park concerts	10,794 24	
		240,201 88
Balance to Surplus 1913		$5,347 62

NOTE 1—The following salaries are included in Administration Parks:

General Superintendent, William S. Manning	$3,600 00
Property Agent, Carl K. Mengel	1,236 95

NOTE 2—The following salaries are included in Superintending Parks:

Superintendent of Druid Hill District, Charles R. Jones	$1,745 00
" " Patterson District, Lloyd Norris	1,745 00
" " Clifton District, James W. Boone	1,745 00
" " Wash. Mon. and Upper Gwynn's Falls, N. F. Flitton	1,170 42
" " Carroll District and Squares, J. Fred Wessler	1,745 00

Expenses, Parks and Squares, appropriation		$274,538 00

EXPENDITURES.

Administration, parks	$794 15	
Special audit, park tax	2,463 85	
Superintending parks	1,405 81	
Conservatories and greenhouses	3,384 02	
Outdoor gardening and forestry	6,532 73	
Lawns and fields	9,996 78	
Roads, drives and gutters	18,707 78	
Paths, walks, steps and benches	5,590 75	
Athletic fields and playgrounds, general	6,532 60	
Buildings, pavilions and toilets	11,231 65	
Policing and gatekeeping	2,602 21	
Live stock, stable, etc	6,700 22	
New stock, horses	1,550 00	
Zoological collection	4,163 51	
Fountains, springs and pumps	610 10	
Quarry	1,280 39	
Repair shop and shoeing	1,531 86	
New automobile truck	4,842 90	
Amounts carried forward	$89,921 31	$274,538 00

Amounts brought forward	$89,921 31	$274,538 00
Supplies, general, flags, etc.	1,819 49	
Renewal flag poles	866 71	
Monuments	39 59	
New stone bridge, Wyman	16,180 86	
Electrical equipment, upkeep	4,145 01	
" lighting service	19,128 63	
Gas, oil and naphtha lighting	5,651 48	
Automobile and automobile truck, supplies and repairs	2,598 26	
Telephones	751 00	
Expenses, Bergner property purchase	164 40	
Title examination, White Estate	75 00	
Illumination Battle Monument (from 1912)	15 91	
Sinking fund, old loans	29,042 29	
Interest, Clifton Loan	35,000 00	
" Patterson Loan	8,000 00	
Sinking fund, 1955 Loan	8,800 00	
Interest, 1955 Loan	40,000 00	
Ground rents	6,820 12	
		269,020 06
Balance carried forward to 1914		$5,517 94

New Improvements, appropriation	$73,624 50

EXPENDITURES.

Bridge, Wyman Drive (see Expenses Parks)	....	
Filling and top soiling Wyman Park	$5,276 28	
Parking squares, Twenty-ninth street (from 1912)	14 00	
" " Thirty-third street (from 1912)	18 00	
Brick stable, Carroll Park (from 1912)	4 77	
Grading and seeding Harford road, Clifton	727 38	
Entrance post lights, Riverside Park (from 1912)	71 93	
Concrete caps on entrance posts, Johnston Sq. (from 1912)	32 50	
Electric fountain, Druid Lake (from 1912)	32 33	
Illumination, monuments and floral emblem (from 1912)	46 80	
Rustic cedar seats and guard railings materials	2,694 73	
Architects and consulting engineers	1,956 81	
Park engineering corps	8,204 22	
		19,079 75
		$54,544 75
Carried forward to 1914	$2,014 93	
Balance to Surplus 1914 (see note)	52,529 82	
		54,544 75

NOTE. $50,000 of this amount re-appropriated in the Ordinance of Estimates for 1914 for Parking Thirty-third street.

PURCHASE OF PROPERTY FOR ADDITION AND NEW ENTRANCE TO GWYNN'S FALLS PARK (48).

Appropriation	$36,000 00
Property acquired	36,000 00

EXTENSION OF PARK SYSTEM (48).

(Funds appropriated through annual Ordinance of Estimates from proceeds of $1,000,000 loan authorized by Chapter 338 of the Acts of the General Assembly of Maryland of 1904 and Ordinance No. 228, approved March 20, 1905.)

Expenditures 1906-1913.

ACCOUNT.	Northwest.	Southwest.	Northeast.	Southeast.	Total.
Purchase price of land	$235,356 06	$217,551 79	$221,284 11	$180,013 28	$854,205 24
Buildings on land	1,250 00	....	....	....	1,250 00
Tax adjustments	477 26	610 40	18 16	....	1,105 82
Acknowledgments	24 30	17 10	2 20	6 70	50 30
Recording deeds	220 00	95 15	92 45	52 75	460 35
Appraising property	1,475 00	150 00	425 00	950 00	3,000 00
Title examination and abstracts	3,130 40	2,691 65	1,746 30	1,274 95	8,843 30
Surveying	2,878 36	1,418 79	644 45	206 49	5,148 09
Olmstead Brothers, advice and plans	910 27	750 48	876 07	62 50	2,599 32
Clerical and other help	1,229 01	1,098 83	1,625 01	512 49	4,465 34
Auctioneers' and attorneys' fees	....	50 00	100 00	....	150 00
Advertising	208 38	....	250 42	....	458 80
Plats, Maps	42 20	26 58	1,102 50	....	1,171 28
Car tickets	10 00	20 00	50 00	....	80 00
Court costs	28 59	....	....	....	28 59
Ground rent	....	....	87 00	....	87 00
Improvement, Patterson Extension	....	....	....	54,157 75	54,157 75
Total	$247,239 83	$224,480 77	$228,303 67	$237,236 91	$937,261 18
Appropriation	$250,000 00	$250,000 00	$250,000 00	$250,000 00	$1,000,000 00
Less discount on sale of stock	2,760 17	2,760 18	2,760 18	2,760 19	11,040 72
Cash balance	$247,239 83	$247,239 82	$247,239 82	$247,239 81	$988,959 28
Receipts	....	1,200 00	....	80 00	1,280 00
Net cash available	$247,239 83	$248,439 82	$247,239 82	$247,319 81	$990,239 28
Expenditures, as above	247,239 83	224,480 77	228,303 67	237,236 91	937,261 18
Cash balances, December 31, 1913	....	$23,959 05	$18,936 15	$10,082 90	$52,978 10

PARK REVENUE (48).

Balance brought forward from 1912		$41,814 75
Railway park tax 1913 (see A—VI (59) for details)		580,846 11
Rentals —		
Mansion, Druid Hill Park	$671 00	
Stand at Zoo, Druid Hill Park	192 20	
Stand, Patterson Park	150 21	
Cottages, Herring Run	347 00	
Cottage, Reservoir, Druid Hill Park	16 00	
Lakes, Druid Hill Park	700 00	
" Patterson Park	340 00	
Dwelling, Wyman Park	433 29	
" Bergner property	458 37	
Towels at showers and lavatories	212 30	
		3,520 37
Sales -		
Sheep	$61 25	
Wool	106 04	
Old material	169 95	
Hay	354 00	
Dumping privilege, Patterson Park	500 00	
Electrical service	2,395 62	
Fines	659 55	
Monument toll, Washington monument	557 40	
Remittances, orders, rolls and coal	880 83	
" expenses on account State Roads Commission	2,331 36	
		8,016 00
		$634,197 23

BATHS A—VI (49).

FREE PUBLIC BATH COMMISSION (49).

Salaries, appropriation			$45,436 00

EXPENDITURES.

Office and Administration.

Superintendent and Secretary, T. M. Beadenkoff		$1,800 00	
Bookkeeper and Paymaster, Robert F. G. Kelley		1,040 00	
Messenger, Nicholas Moore		314 00	
" Percy Gorrell		7 00	
		$3,161 00	

Walters Baths No. 1.

Assistant Engineer, Harry Shaw	$782 86		
" " Ira Lee	756 73		
" " John F. Pickel	755 30		
" Engineers	150 28		
		2,445 17	
Keeper, Victor Heim	$837 05		
First Assistant, George W. Legg	675 83		
Second Assistant, John Bewig	632 12		
Third Assistant, William Grey	617 88		
Fourth Assistant, Fred. Lephardt	571 50		
Engineer, Joseph DeFontes	820 13		
Woman Attendant, Mary Washington	439 05		
" " Blanche Parrott	443 10		
" " Katherine Stubbs	305 27		
" " Caroline Sawin	114 30		
Laundress, Emma Enis	439 58		
Assistants and attendants	80 08		
		5,975 89	

Walters Baths No. 2.

Keeper, Edwin Casey	$765 00		
First Assistant, William A. Kelly	394 57		
Second Assistant, Joseph H. Stallings	596 73		
Third Assistant, Joseph Jordan	246 81		
Fourth Assistant, Charles A. Kohlepp	242 28		
Engineer, John C. Kaler	788 71		
Amounts carried forward	$3,034 10	$11,582 06	$45,436 00

Amounts brought forward	$3,034 10	$11,582 06	$45,436 00
Woman Attendant, Mary Seelye	368 27		
" " Ida Schaeffer	115 97		
" " Sarah Eppley	140 45		
Laundress, Mary List	268 05		
Assistants and attendants	302 02		
		4,228 86	
Walters Baths No. 3.			
Keeper, Joseph L. Myers	$764 02		
Assistant, W. I. Butler, Jr.	666 15		
Engineer, John A. Hamilton	704 13		
Woman Attendant, Mary Gent	389 62		
Laundress, Maria Blackwood	273 70		
Attendants	55 39		
		2,853 01	
Walters Baths No. 4.			
Keeper, P. M. Steigmann	$788 22		
First Assistant, George Wirth	626 45		
Second Assistant, William Kirby	580 45		
Engineer, A. J. Kaufman	795 99		
Woman Attendant, Pauline Otto	409 24		
" " Louise Murphy	172 60		
Laundress, Fannie Gross	412 03		
Assistants and attendants	214 79		
		3,999 77	
Greenmount Avenue Baths and Comfort Station.			
Keeper, Charles Zeller	$540 00		
" William A. Kelly	313 31		
First Assistant, Louis Friedel	616 31		
Second Assistant, August Roeber	628 00		
Third Assistant, Thomas Barnes	580 99		
Fourth Assistant, Emil Lenz	416 77		
Assistant, William J. Webb	120 16		
" Edgar Coman	111 27		
Engineer, Randolph Harding	767 52		
Woman Attendant, Ella Arnold	286 29		
" " Ella Justice	357 49		
" " Sarah Eppley	157 07		
" " Sarah Carter	117 50		
Laundress, Christina McDonald	413 27		
" Mary List	142 13		
Assistants and attendants	367 70		
		5,935 78	
Men's Outdoor Baths.			
Keeper, Winans, G. W. Butterworth	$314 11		
First Assistant, Winans, Thomas McDonough	224 08		
Second Assistant, Winans, John Leonard	219 13		
Third Assistant, Winans, George Moon	240 63		
Fourth Assistant, Winans, M. J. Fitzgerald	154 40		
Fifth Assistant, Winans, P. Fitzgerald	188 90		
Keeper, Gwynns, John Kuester	267 38		
First Assistant, Gwynns, Fred. Koehler	209 38		
Second Assistant, Gwynns, Vernon Kinker	230 00		
Third Assistant, Gwynns, George Kuester	223 70		
Fourth Assistant, Gwynns, George Johnson	161 00		
Helpers and attendant	84 34		
		2,517 05	
Women's Outdoor Baths.			
Keeper, Locust Point, Ella Arnold	$148 44		
Assistant, Locust Point, John McDonough	172 00		
" Locust Point, Henry B. Davis	152 34		
Assistants	69 77		
		542 55	
Amounts carried forward		$31,659 08	$45,436 00

Amounts brought forward		$31,659 08	$45,436 00
Patterson Park Field House.			
Keeper, Charles Zeller	$447 31		
First Assistant, Joseph Roseman	793 13		
Second Assistant, John R. Doering	648 67		
Chief Guard, Arthur Abell	265 61		
Guard, Frank Simmons	233 63		
“ Leo Knox	227 50		
“ William King	214 75		
“ Peter Sevitzky	204 50		
“ Raymond Smith	214 00		
“ William Bauernschmidt	215 75		
“ Henry Myers	200 25		
Locker Man, William Herbich	381 54		
“ “ Herman Lake	182 80		
“ “ John Conway	157 40		
“ “ Clifton Ruppert	131 20		
“ “ Klickner Ehrlich	124 00		
“ “ Paul Moore	131 60		
Woman Attendant, Mary Roth	448 46		
“ “ Sophia Bullock	164 23		
Engineer, Daniel Hoffman	769 08		
Assistants	275 15		
		6,430 96	
West Park Recreation Centre.			
Attendant, August Heintz	$676 50		
Woman Attendant, Minnie Vogel	199 85		
“ “ Mary Yeager	109 19		
Attendants	36 97		
		1,022 51	
Swimming Instructors.			
Man Instructor, Augustus Lowsley	$200 00		
Woman Instructor, Margaret Michael	122 50		
		322 50	
Public Comfort Station, Market Place.			
Attendant, John Wiegand	$682 53		
“ John J. Habert	525 55		
“ Henry Liere	220 57		
Woman Attendant, Mollie Helm	408 60		
“ “ Rose Schoff	347 55		
Attendants	146 83		
		2,331 63	
Portable Shower Baths.			
Attendant, Charles Brandt	$535 86		
“ John Kershaw	255 72		
“ Louis Eye	206 00		
“ W. N. Bishop	118 00		
Woman Attendant, Louise Murphy	171 63		
Attendants	410 78		
		1,697 99	
Painter and Repair Man.			
A. H. Dennis	$612 00		
		612 00	
Outdoor Repair Work.			
Foreman, G. W. Butterworth	$575 00		
Assistant, John Kuester	359 50		
“ Arthur Abell	280 00		
Assistants	50 00		
		1,264 50	
			45,341 17
Balance to Surplus 1913			$94 83

Expenses, appropriation		$27,017 00

EXPENDITURES.

Office and Administration.

Advertising, printing, supplies	$641 00	
Car fares	249 21	
		$890 21

Walters Baths No. 1.

Coal	$1,448 76	
Soap	870 10	
Lighting and electric power for fans	256 87	
Repairs and sundries	1,884 25	
Betterments	618 89	
Insurance	135 00	
		5,213 87

Walters Baths No. 2.

Coal	$600 66	
Soap	458 16	
Electric light and power	172 23	
Repairs and sundries	389 08	
Betterments	184 80	
Towels	66 15	
		1,871 08

Walters Baths No. 3.

Coal	$632 78	
Soap	219 07	
Electric light and power	184 91	
Repairs and sundries	328 57	
Insurance and betterments	196 74	
		1,562 07

Walters Baths No. 4.

Coal	$583 68	
Soap	332 64	
Repairs and sundries	1,087 97	
Electric light and power	211 96	
Insurance	112 50	
Nine additional bath cabins	1,220 05	
Fitting up larger laundry	537 21	
Baths and toilet-rooms in place of Women's Public Comfort Station	323 75	
		4,409 76

Greenmount Avenue Baths and Comfort Station.

Coal	$563 55	
Soap	455 03	
Electric light and power	297 36	
Repairs and sundries	774 74	
Betterments	152 40	
Towels	482 98	
		2,726 06

Men's Outdoor Baths—Winans.

Rent	$162 50	
Betterments, painting	716 50	
		879 00

Gwynns Falls Baths.

Locker-rooms	$665 11	
Bathing suits (men's)	155 62	
Bathing suits (women's)	485 55	
Towels	180 32	
Sundries	305 32	
		1,791 92

Amounts carried forward	$19,343 97	$27,017 00

Amounts brought forward		$19,343 97	$27,017 00

Women's Outdoor Baths.

Rafts, towels, hardware	$146 29		
Betterments, etc.	100 40		
Bathing suits	38 05		
Bridge at B. & O. R. R.	250 00		
		534 74	

Patterson Park Swimming Pool.

Coal	$309 46		
Electric light and power	366 59		
Hardware, lumber and sundries	1,022 21		
Sand	226 00		
Soap	128 88		
Bathing suits	744 01		
Public exercises (Labor Day)	25 61		
Repairs to rafts	385 50		
Enlarging locker-room space	181 00		
More showers	150 00		
Towel chute	51 50		
Bubble fountains	224 63		
Gutter and drainage	150 00		
		3,965 39	

Public Comfort Station.

Soap	$90 45		
Toilet paper	180 30		
Ice for fountains	240 17		
Coal	98 00		
Electric light and power	132 92		
Brushes, mops	31 32		
Repairs and sundries	91 16		
Repairs to toilets	79 46		
		943 78	

Portable Shower Baths.

New portable	$749 77		
Signs, printing, etc.	46 69		
Hauling bath houses	48 50		
Sundries, coal, soap, etc.	756 83		
		1,601 79	

West Park Recreation House.

Coal, light and power	$406 40		
Soap	58 59		
Brushes, mops	162 34		
		627 33	
			27,017 00

BATH HOUSE AND COMFORT STATION, NORTHEAST BALTIMORE—GREENMOUNT AVENUE BATHS (49).

Balance brought forward from 1912	$8,703 85	
Refund	400 00	
		$9,103 85

EXPENDITURES.

James Posey, completion of work	$50 00	
B. W. Harper, completion of work	742 89	
		792 89
Balance to Surplus 1913		$8,310 96

ADDITION TO GWYNNS FALLS POOL (49).

Appropriation	$5,000 00	
Transferred from Contingent Fund	2,000 00	
		$7,000 00

EXPENDITURES.

Charles Herbold & Sons, contractors	$6,720 09	
Miscellaneous	279 91	
		7,000 00

TWO PUBLIC COMFORT STATIONS IN MARKETS (49).

Brought forward from 1912	$15,000 00	
Appropriation	10,000 00	
		$25,000 00

EXPENDITURES.

Property acquired	4,995 60
Balance carried forward to 1914	$20,004 40

BOILER No. 1 BATH HOUSE (49).

Balance brought forward from 1912	$1,181 88
Wallace Stebbins & Sons Company, grates	311 00
Balance to Surplus 1913	$870 88

REVENUE (49).

Received from patrons of public baths	$22,229 84
Paid into city treasury	22,229 84

These receipts are from the following fees:

Indoor Baths—Bathers—Towel and soap, 3 cents.
Indoor Baths—Use of laundry, per hour, 3 cents.
Outdoor Baths—Fees, including towel and soap, 1, 2, 3 and 5 cents.

MISCELLANEOUS A—VI (50).

MARYLAND INSTITUTE (50).

Appropriation	$12,000 00
Paid Maryland Institute	12,000 00

CHILDREN'S PLAYGROUND ASSOCIATION (50).

Appropriation	$14,000 00
Paid Children's Playground Association	14,000 00

VETERAN VOLUNTEER FIREMEN'S ASSOCIATION (50).

Appropriation	$1,000 00
Paid Veteran Volunteer Firemen's Association	1,000 00

WEST PARK RECREATION CENTER (50).

Appropriation	$1,000 00
Paid West Park Recreation Center	1,000 00

MUNICIPAL GAMES, PATTERSON PARK (50).

Appropriation	$500 00
Expenditures	499 14
Balance to Surplus 1913	$0 86

EDGAR ALLAN POE ASSOCIATION (50).

Balance brought forward from 1912	$1,000 00
No expenditures—Balance carried forward to 1914	1,000 00

PUBLIC ATHLETIC LEAGUE, BROADWAY HALL (50).

Balance brought forward from 1912	$1,000 00
No expenditures—Balance carried forward to 1914	1,000 00

PUBLIC ATHLETIC LEAGUE (50)

Appropriation	$3,000 00
Paid Public Athletic League	3,000 00

CITY FORESTER (50).

Expenses, appropriation	$5,000 00	
Receipts	63 55	
		$5,063 55
EXPENDITURES.		
Tools	$978 03	
Labor	2,217 39	
Team hire and soil	854 83	
Miscellaneous	157 14	
Nursery stock	499 20	
Spraying materials	119 00	
Office fixtures	101 34	
Salary (clerk)	126 66	
		5,053 59
Balance to Surplus 1913		$9 96

MEMORIAL TO F. C. LATROBE (50).

Appropriation	$5,000 00
No expenditures—Carried forward to 1914	5,000 00

MURAL DECORATIONS, COURT HOUSE (50).

Brought forward from 1912	$500 00
Expended	496 50
Balance to Surplus 1914	$3 50

7. PUBLIC DEBT

LOANS A—VI (51).

STATE TAX ON CITY LOANS (51).

Appropriation	$101,871 28	
Refunds	985 55	
		$102,856 83
Paid State for tax on city loans		96,754 05
Balance to Surplus 1913		$6,102 78

TEMPORARY LOANS (51).

(Borrowed by Commissioners of Finance.)

National Bank of Commerce of Baltimore	$100,000 00
Calvert Bank of Baltimore	45,000 00
National Marine Bank of Baltimore	55,000 00
Liberty National Bank of New York	100,000 00
American Exchange Bank of New York	100,000 00
The Bank of New York	50,000 00
The Franklin National Bank of Philadelphia	50,000 00
Paid into city treasury	$500,000 00

SINKING FUNDS—COMMISSIONERS OF FINANCE A—VI (52).

(For details see Commissioners of Finance report for 1913.)

Paid to Mayor and City Council of Baltimore interest on certificates of deposits, Western Maryland Railroad Loans	$148,365 00

INTEREST ON STOCKS AND INVESTMENTS (52).

Interest received and credited to various sinking funds	$722,466 68

INTEREST ON DEPOSITS (52).

Interest received on daily balances	$4,375 52

WATER 1943 LOAN SINKING FUND (52).

Received from Water Board 1½% of 1913 collections of water rents	$21,614 43

INTEREST ON CERTIFICATES OF DEPOSIT (52).

Interest received on Western Maryland Railroad Loans	$138,547 50

PURCHASE AND SALES OF CITY STOCK (52).

Paid for city stock bought for account of sinking funds	$1,508,555 78

PARK TAX (52).

Received from Park Board 5% railway park tax receipts for 1913 for account of Public Park Sinking Fund No. 2	$29,042 29

RENTALS OF REAL ESTATE AND GROUND RENTS (52).

Receipts for the year on various investments	$32,027 36

PARK BOARD 1955 LOAN (52).

Received from Park Board	$8,800 00

GENERAL FUND 1955 LOAN (52).

Paid Mayor and City Council of Baltimore for stock	$300,000 00

8. INTEREST

INTEREST A—VI (53).

Interest received from the various city depositories on daily bank balances and paid into city treasury	$65,751 00

HORWITZ BENEVOLENT FUND (53).

(Commissioners of Finance.)

Interest distributed to 12 poor families of Baltimore	$742 68
Interest received on fund	742 74
Balance to the fund	$0 06

FREDERICK RAINE FUND (53).

(Commissioners of Finance.)

Interest received on funds	$14 00
Cost of two gold medals for account of Maryland Institute and Board of School Commissioners	14 00

UNPAID INTEREST ON STOCK DEBT (53).

Balance brought forward from 1912	$6,475 23
Payments in 1913 to proper creditors	734 25
Balance carried forward to 1914	$5,740 98

INTEREST ON TAXES A—VI (54).

(City Collector.)

Received from interest on taxes in arrears	$88,253 83
Paid into city treasury	88,253 83

INTEREST ON STOCK DEBT A—VI (55).

(City Register.)

Appropriation	$2,700,655 47	
Accrued interest on stock sales	90,601 17	
		$2,791,256 64
EXPENDITURES.		
Water loans	$415,000 00	
Commissioners of Finance (W. M. R. R. Funds)	148,365 00	
Park loans	83,000 00	
Interest on sundry loans	2,101,119 73	
		2,747,484 73
Balance to Surplus 1913		$43,771 91

RECEIPTS FOR ACCOUNT OF INTEREST ON STOCK DEBT (55).

From Water Board	$415,000 00
" Commissioners of Finance (account W. M. R. R. funds)	148,365 00
" Park Board	83,000 00
Paid into city treasury	$646,365 00

9. TAXATION

REAL AND PERSONAL TAXES A—VI (56).

TAX SALES (56).

Debit balance brought forward from 1912	$7,689 79	
Purchases in 1913	1,284 88	
		$8,974 67
Sales in 1913		1,526 20
Debit balance carried forward to 1914		$7,448 47

TAX COLLECTIONS BY CITY COLLECTOR (56).

(For details see City Collector's Report.)

Penalties	$53,849 71
Real property, 1913	6,044,520 59
" " in arrears	906,976 55
Personal property, 1913	1,455,036 28
" " in arrears	231,398 57
Securities	552,533 35
Savings banks deposits	173,186 46
Paid into city treasury	$9,419,027 71

CONSCIENCE FUND (56).

Receipts	$161 50
Paid into city treasury	161 50

LIQUOR LICENSES A—VI (57).

Received from State of Maryland during 1913, being three-fourths of the amount received for liquor licenses in Baltimore city	$996,516 31
Paid into city treasury	996,516 31

OTHER LICENSES A—VI (58).

GENERAL LICENSES (58).

Appropriation	$2,100 00
Expended for advertising, license plates, stationery and postage	5,348 78
Debit balance charged to Surplus 1913	$3,248 78

RECEIPTS FROM GENERAL LICENSES FOR THE YEAR 1913 BY THE COLLECTOR OF WATER RENTS AND LICENSES (58).

One-horse wagons	$20,947 00
Two-horse wagons	18,632 00
Three-horse wagons	1,344 00
Four-horse wagons	408 00
Six-horse wagons	135 00
Exchanges	35 00
Numbers replaced	203 50
Cabs	48 75
Hacks	343 75
Package carts	849 50
Coal oil	1,653 00
Theatrical permits and licenses	7,302 03
Telephone and telegraph poles	17,474 00
Cars	4,490 00
Scows	829 50
Billiard tables	195 00
Pool tables	8,067 50
Bagatelle tables	590 00
Bowling alleys	1,275 00
Pawnbrokers	2,883 35
O. E. A. licenses	296 55
Bacon	1,000 00
Sausage and pudding	50 00
Merchandise (women)	120 00
Fruit	14 00
Gasoline stoves	107 50
Employment agencies	614 60
Venders from wagons	6,745 00
" " baskets	1,468 00
" of country produce	385 00
Venders' badges replaced	34 25
Peddlers' licenses (collected by Comptroller)	476 42
Paid into city treasury	$99,017 20

DOG LICENSES AND FINES (58).

Received from licenses, renewals, fines and redemptions	$24,003 71

EXPENDITURES.

Maryland Society for the Prevention of Cruelty to Animals, contractor	$14,500 00	
Miscellaneous	446 60	
		14,946 60
Paid into city treasury		$9,057 11

FRANCHISE TAXES A—VI (59).

	1909.	1910.	1911.	1912.	1913.
United Railways and Electric Company. (Nine Per Cent. on Gross Receipts.)					
Three months previous to:					
January	$109,604 92	$123,573 65	$129,020 74	$135,086 26	$145,535 66
April	100,191 30	114,012 59	117,068 91	124,315 56	134,270 34
July	113,694 46	126,290 91	132,686 62	142,713 58	148,544 74
October	119,247 85	126,636 17	130,899 53	138,112 21	146,465 27
	$442,738 53	$490,513 32	$509,675 80	$540,227 61	$574,816 01
Annex cases	26,445 67	61,200 00			
Total	$469,184 20	$551,713 32	$509,675 80	$540,227 61	$574,816 01
W., B. and A. Electric Railway Company.					
Three months previous to:					
January	$964 70	$1,156 74	$1,117 55	$1,365 14	$1,337 21
April	896 40	957 25	948 93	1,079 18	1,316 34
July	1,156 80	1,218 89	1,193 37	1,484 47	1,456 80
October	1,255 33	1,260 49	1,240 90	1,435 59	1,687 18
	$4,273 23	$4,593 37	$4,500 75	$5,364 38	$5,797 53
From receivers (March)			216 44		
Total	$4,273 23	$4,593 37	$4,717 19	$5,364 38	$5,797 53
Maryland Electric Railway Company.					
Three months previous to:					
January		$60 77	$74 37	$79 90	$56 15
April	$40 18	66 68	56 99	74 79	46 83
July	58 04	80 85	83 80	90 10	71 00
October	65 25	82 40	89 41	60 04	58 59
Total	$163 47	$290 70	$304 57	$304 83	$252 57
Recapitulation.					
United Railways and Electric Co.	$469,194 20	$551,713 32	$509,675 80	$540,227 61	$574,816 01
Washington, Baltimore and Annapolis Electric Ry.	4,273 23	4,593 37	4,717 19	5,364 38	5,797 53
Maryland Electric Railway Co.	163 47	290 70	304 57	304 83	232 57
Grand total	$473,630 90	$556,597 39	$514,697 56	$545,896 82	$580,846 11

PUBLIC FRANCHISES AND MINOR PRIVILEGES (59).

Franchises.

American Ice Co., scales, Ord. No. 359, 1908	$4 00	
American Tobacco Co., use of conduits, Ord. No. 117, 1912	5 00	
American Tobacco Co., bridgeway, Ord. No. 257, 1907	21 00	
Baltimore Bargain House, use of conduits, Ord. No. 520, 1910	5 00	
Baltimore Electric Light and Power, Co., Ord. No. 161, 1904	17 21	
Baltimore Steam Packet Co., marquee, Ord. No. 72, 1912	20 00	
Baltimore & Ohio R. R. Co., tracks, Ord. No. 237, 1905	40 00	
Baltimore & Ohio R. R. Co., curves, Ord. No. 105, 1904	40 00	
Baltimore & Ohio R. R. Co., tracks, Ord. No. 121, 1908	315 40	
Baltimore & Ohio R. R. Co., tracks, Ord. No. 97, 1912	55 00	
Baltimore & Ohio R. R. Co., tracks, Ord. No. 471, 1910	50 00	
Baltimore & Ohio R. R. Co., switch and scales, Ord. No. 81, 1904	50 00	
Baltimore & Ohio R. R. Co., tracks, Ord. No. 141, 1904	60 00	
Baltimore & Ohio R. R. Co., tracks, Ord. No. 387, 1909	15 00	
Baltimore & Ohio R. R. Co., tracks and curves, Ord. No. 234, 1913	15 00	
Bartlett, Hayward & Co., tracks, Ord. No. 190, 1908	123 00	
Bartlett, Hayward & Co., tracks, Ord. No. 189, 1909	63 45	
Bates & Morstein, electric sign, Ord. No. 328, 1909	10 00	
Isaac Benesch & Son, bridgeway, Ord. No. 144, 1912	31 50	
Bernheimer Bros., tunnel, Ord. No. 201, 1908	12 50	
Bernheimer Bros., tunnel and superstructure, Ord. No. 201, 1906	12 50	
Bernheimer Bros., tunnel and superstructure, Ord. No. 112, 1906	50 00	
John Boyle Co., switch, Ord. No. 71, 1912	42 00	
The Deford Co., superstructure, Ord. No. 254, 1905	50 00	
H. D. Dreyer, tracks, Ord. No. 360, 1913	100 00	
A. Eisenberg, superstructure, Ord. No. 139, 1904	28 00	
Hecht Bros. & Co., tunnel, Ord. No. 230, 1908	100 00	
Hecht Bros. & Co., superstructure, Ord. No. 286, 1913	29 25	
Hochschild, Kohn & Co., bridgeway and tunnel, Ord. No. 643, 1911	50 00	
Hochschild, Kohn & Co., superstructure and bridgeway, Ord. No. 14, 1911	5 00	
Holmes Electric Protective Co., franchise tax, Ord. No. 265, 1905	250 00	
Hutzler Bros., superstructure, Ord. No. 79, 1904	50 00	
The Johns Hopkins Hospital, conduits, Ord. No. 224, 1913	54 00	
E. H. Josselyn, bridgeway, Ord. No. 91, 1912	10 00	
Merchants & Miners Trans. Co., use of conduits, Ord. No. 364, 1909	5 00	
Monticello Distilling Co., use of conduits, Ord. No. 479, 1910	5 00	
Northern Central Ry. Co., tracks, Ord. No. 61, 1902	10 00	
Northern Central Ry. Co., switch, Ord. No. 333, 1913	30 00	
Northern Central Ry. Co., switch, Ord. No. 324, 1913	30 00	
Northern Central Ry. Co., switch and curves, Ord. No. 30, 1900	150 00	
O'Neill & Co., superstructure and bridgeway, Ord. No. 646, 1911	50 00	
P., B. & W. Ry. Co., tracks, Ord. No. 249, 1913	45 00	
Savoy Theatre Co., superstructure, Ord. No. 87, 1904	25 00	
Henry Sonneborn & Co., fire escape, Ord. No. 61, 1911	50 00	
Southern Can Co., switch and siding, Ord. No. 355, 1913	110 00	
Wm. Suchting & Son, bridgeway, Ord. No. 684, 1911	40 00	
United Railways and Electric Co., tracks, Ord. No. 274, 1913	2,470 00	
United Railways and Electric Co., tracks, Ord. No. 31, 1913	5,200 00	
United States of America, use of conduits, Ord. No. 281, 1913	10 00	
Vacuum Cleaner Co., use of streets for cleaning machines, Ord. No. 242, 1907	10 00	
W., B. & A. Ry. Co., tracks, Ord. No. 180, 1912	25 00	
Western Maryland R. R. Co., tracks, Ord. No. 253, 1905	38 39	
Western Maryland R. R. Co., tracks, Ord. No. 26, 1905	25 00	
Western Maryland R. R. Co., tracks, Ord. No. 264, 1913	273 00	
		$10,385 20

Minor Privileges.

Awnings	$704 75	
Areas	2,817 18	
Bay windows	683 50	
Bow windows	1,397 20	
Closets	770 00	
Drains	13,472 50	
Lights	482 00	
Marquees	496 10	
Miscellaneous	2,531 18	
Signs	1,019 05	
Use of sidewalks and streets	344 49	
Vaults	610 26	
		25,328 21
		$35,713 41
Refunds		344 00
Paid into city treasury		$35,369 41

MISCELLANEOUS A—VI (60).

INSPECTION OF WEIGHTS AND MEASURES (60).

Salaries, appropriation		$7,200 00

EXPENDITURES.

First and Third Districts, John A. Haeffner	$1,200 00	
" " Second Districts, Joseph Lynch	1,200 00	
Third and Fourth Districts, Joseph J. Lanahan	1,200 00	
Second and Fourth Districts, John Brendel	1,200 00	
Long and Dry Measures, Charles Volk	1,200 00	
At large, Charles J. Silverson	1,200 00	
		7,200 00

Expenses, appropriation		$1,350 00

EXPENDITURES.

Vehicles	$302 50	
Assistants	488 30	
Car fare	248 15	
Equipment	152 28	
Telephone calls	40 30	
Railroad fare	22 50	
Miscellaneous	11 10	
		1,265 13
Balance to Surplus 1913		$84 87

REVENUE.

Received for inspections for work outside city	$101 25
Paid into city treasury	101 25

NUMBER OF BUSINESS PLACES WHERE SCALES AND MEASURES WERE TESTED AND SEALED DURING THE YEAR 1913 (60).

GEORGE A. DONOGHUE, *Chief Inspector.*

BUSINESS PLACES.	First District, J. A. Haeffner and Jos. Lynch.	Second District, Joseph Lynch and J. Brendel.	Third District, J. Lanahan and J. A. Haeffner.	Fourth District, J. Brendel and J. Lanahan.	Long and Dry Measure, Chas. Volk.	Total, 1913.	Total, 1912.	Total, 1911.
Bakeries	50	24	14	19	....	107	127	120
Butchers	295	45	111	177	....	628	640	587
Butter, eggs and poultry	202	16	41	52	....	311	328	329
Confectioners	333	262	236	215	....	1,046	845	807
Coal and wood	23	36	39	21	234	353	302	291
Commission merchants	47	....	6	77	6	136	185	166
Druggists	88	84	81	52	....	305	276	304
Dairies	66	15	14	9	....	104	109	134
Dry goods, carpets, etc	....	....	....	....	643	643	339	375
Fruit	174	18	27	65	236	520	634	426
Fish	104	4	12	17	....	137	142	154
Factories and foundries	23	14	21	36	....	94	51	48
Groceries and meats	475	601	527	405	2,386	4,394	3,453	3,615
Grocery	503	267	191	264	....	1,225	1,419	1,565
Hay, feed and grain	40	11	27	26	66	170	163	181
Hardware and paint	67	45	50	33	....	195	206	155
Hucksters	378	137	159	202	1,071	1,947	2,560	1,804
Ice	10	5	11	8	....	34	24	31
Junk	38	7	9	14	....	68	56	58
Liquor, breweries, etc	337	176	187	141	....	841	688	740
Oysters	21	30	53	20	3	127	111	136
Oyster packers	12	2	....	6	19	39	25	20
Paints and oils	29	2	4	11	....	46	68	117
Teas and coffees	31	6	10	15	....	62	49	63
Tobacco	28	2	10	24	....	64	58	61
Miscellaneous*	275	54	110	40	195	674	341	241
Wharves	....	....	....	....	....	....	....	8
	3,649	1,863	1,950	1,949	4,859	14,270	13,199	12,539

	Total, 1913.	Total, 1912.	Total, 1911.
Weights and measures confiscated and condemned	1,371	336	289
Scales confiscated and condemned	119	117	136
Arrests for false weights and measures	15	18	15

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*Miscellaneous includes, wood, rope, leather, feathers, cheese, express companies, machinery, etc.

PERMITS FOR SHEDS (60).

(Inspector of Buildings.)

Receipts	$1,790 25
Expended for advertising	761 19
Paid into city treasury	$1,029 06

10. SUNDRIES

COMMISSIONERS OF FINANCE A—VI (61).

(Sinking Funds, 1913.)

Appropriation		$989,002 83

EXPENDITURES.

Payments to Commissioners of Finance for Following Sinking Funds:

General Fund Sinking Fund	$62,459 78	
Water 1916 Loan Sinking Fund	71,382 61	
“ 1922 “ “ “	17,845 66	
“ 1926 “ “ “	35,691 31	
“ 1958 “ “ “	38,000 00	
Conduit 1922 Loan Sinking Fund	35,691 31	
“ 1928 “ “ “	35,691 31	
“ 1958 “ “ “	7,600 00	
“ 1962 “ “ “	15,200 00	
Internal Improvement 1928 Loan Sinking Fund	107,073 91	
Funding 1936 Loan Sinking Fund	35,691 31	
Public Improvement 1940 Loan Sinking Fund	71,382 60	
Refunding 1940 Loan Sinking Fund	71,382 61	
Four Million 1945 Loan Sinking Fund	17,845 66	
Burnt District Improvement 1954 Loan Sinking Fund	71,382 61	
New Engine House 1957 Loan Sinking Fund	8,800 00	
“ School House 1957 Loan Sinking Fund	8,800 00	
School House 1961 Loan Sinking Fund	11,400 00	
Jones Falls Improvement 1961 Loan Sinking Fund	7,600 00	
New Sewerage Improvement 1961 Loan Sinking Fund	76,000 00	
Burnt District 1960 Loan Sinking Fund	7,600 00	
Dock Improvement 1961 Loan Sinking Fund	15,200 00	
Annex 1954 Loan Sinking Fund	17,500 00	
“ 1951 Loan Sinking Fund	29,500 00	
Sewerage 1980 Loan Sinking Fund	37,000 00	
Paving 1951 Loan Sinking Fund	59,000 00	
		972,720 68
Balance to Surplus 1913		$16,282 15

FORFEITURE OF DEPOSIT (61).

(Commissioners of Finance.)

Forfeiture of deposit with bid for purchase of city stock	$40 00

REDEMPTION OF FIVE MILLION SIX PER CENT. 1890 LOAN, IN PART (61).

(Commissioners of Finance.)

Paid Thos. Hughes, trus. for Emily L. Harper & Oliver O'Donnell, int.	$1,703 45

REDEMPTION OF ENTIRE ISSUE WATER FOUR PER CENT. 1922 LOAN (61).

(Commissioners of Finance.)

Commissioners of Finance in trust for the Enoch Pratt Free Library Fund, as per resolution of Commissioners, December 4, 1913	$500,000 00
Cash portion of loan	1,284 85

11. PUBLIC TRUST FUNDS

ENOCH PRATT FREE LIBRARY FUND ANNUITY (62).

(Commissioners of Finance.)

Receipts from investments and from Mayor and City Council.......	$50,000 00
Expended	50,000 00

CITY REGISTER IN TRUST FOR PROPERTY SOLD FOR TAXES (62).

Interest received on investments...............................	$1,205 99
Expended for purchase of city stock..........................	92 74
Cash balance in the fund...............................	$1,113 25

PART III

STATEMENT OF ACTIVE LOANS

1913

1. Annex Improvement 1951 Loan.
2. Burnt District Improvement 1960 Loan.
3. Dock Improvement 1961 Loan.
4. New Sewerage 1961 Loan.
5. Conduit 1958 Loan.
6. Conduit 1962 Loan.
7. New School House 1957 Loan.
8. School House 1961 Loan.
9. New Engine House 1957 Loan.
10. Water 1958 Loan.
11. Jones Falls Improvement 1961 Loan.
12. Paving 1951 Loan.
13. Public Park Improvement 1955 Loan.

STATEMENT OF ACTIVE LOANS—1913

TITLE OF LOAN. (Year indicates when matures.)	Legislative Authority	Ordinance Authority	Authorized Issue	Issued to Dec. 31, 1913.	Authorized Appropriation Through Annual Ordinance of Estimates, to Accounts Stated, to December 31, 1913		Returned to Loan	Actual Appropriation to Dec. 31, 1913	Expended to Dec. 31, 1912.	Expended in 1913.	Total Expended to Dec. 31, 1913	Appropriation Credit Balance Carried Forward to 1914	Discount on Loan to Dec. 31, 1913	Unappropriated Balance of Loan Dec. 31, 1913.	Cash Received from Commrs. of Finance from Sale of Stock to Dec. 31, 1913.	Cash Balance, Dec. 31, 1913.	
					Account	Amount										Dr.	Cr.
1 Annex Improvement 1951 Loan	Ch. 736, Acts 1910	No. 662 of 1911	$2,500,000 00	$725,000 00	Salaries, Annex Improvement Commission	$41,000 00	$8,256 20	$32,743 80	$12,[illegible]	$19,[illegible]	[illegible]						
					Repairing streets, lanes, alleys, etc.	[illegible]		[illegible]	[illegible]	351,[illegible]	[illegible]	$192,993 90					
					Opening Kenworth avenue, Ord. 418, 1909	[illegible]		[illegible]				[illegible]					
					" Garrett avenue, Ord. 197, 1908	[illegible]		[illegible]				[illegible]					
					" Twenty-sixth street, Ord. 37, 1910	[illegible]		[illegible]				[illegible]					
					" Twenty-seventh street, Ord. 536, 1910	2,152 19		2,152 19				[illegible]					
					" Oak street, Ord. 524, 1910	2,501 16		[illegible]				[illegible]					
					" Wyman avenue, Ord. 695, 1911	2,308 97		[illegible]				[illegible]					
					" Thirty-fourth street, Ord. 189, 1910	17,319 26		[illegible]				17,319 26					
					" Homestead street, Ord. 355, 1909	[illegible]		[illegible]				[illegible]					
					" Thirty-third street, Ord. 251, 1907	[illegible]		[illegible]				[illegible]					
					" Dukeland street, Ord. 286, 1909	22,591 52		[illegible]				[illegible]					
					" Eleventh street, Ord. 261, 1907	25,157 25		[illegible]				[illegible]					
					" Montebello avenue, Ord. 289, 1907	22,069 08		[illegible]				[illegible]					
					" Thirtieth street, Ord. 117, 1908	17,818 99		17,818 99				[illegible]					
					" Oak street, Ord. 386, 1909	3,811 41		3,811 41				3,811 41					
					" Thirty-first street, St. Paul street to York road	[illegible]		[illegible]				[illegible]					
					" Bartlett avenue, Ord. 119, 1912	7,808 79		[illegible]				[illegible]					
					" Baker street, Ord. 535, 1910	7,864 69		[illegible]				[illegible]					
					Totals	$1,000,000 00	$8,256 20	$991,743 80	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$1,462,391 70	[illegible]		$101,181 03
2 Burnt District Impt. 1960 Loan	Ch. 247, Acts 1908	No. 391 of 1909	$1,000,000 00	$685,000 00	Salaries, public wharves and docks	$40,136 00	$8,950 32	$31,185 68	$31,185 68		$31,185 68						
					Construction, public wharves and docks	462,000 00	478 41	461,521 59	461,521 59		461,521 59						
					Pratt Street Bridge, construction, paving and property	380,000 00	181,381 84	198,618 16	[illegible]	$19,[illegible]	141,022 27	$57,595 89					
					Totals	$882,136 00	$190,810 57	$691,325 43	[illegible]	[illegible]	$633,729 54	[illegible]	$3,887 26	[illegible]	$681,112 74		[illegible]
3 Dock Improvement 1961 Loan	Ch. 485, Acts 1910	No. 557 of 1910	$2,000,000 00	$970,000 00	Salaries	$36,136 00	$5,698 01	$30,437 99	$12,170 [illegible]	$18,[illegible]	[illegible]						
					Commercial and recreation pier, east of Broadway	890,000 00		890,000 00	431,670 18	214,[illegible]	[illegible]	[illegible]					
					Property and pier, south side harbor	980,000 00		980,000 00	346,[illegible]	124,[illegible]	470,718 40	[illegible]					
					Totals	$1,906,136 00	$5,698 01	$1,900,437 99	$791,[illegible] 16	[illegible]	$1,17[illegible] 16	[illegible]	[illegible]	$60,992 01	$931,430 00	$216,008 16	
4 New Sewerage 1961 Loan	Ch. 630, Acts 1910	No. 653 of 1911	$10,000,000 00	$5,975,000 00	Salaries, administrative	$55,400 00	$197 82	$55,202 18	$27,[illegible]	$27,[illegible]	$55,202 18						
					" construction	556,220 00	128,963 82	427,256 18	187,[illegible]	239,737 31	427,256 18						
					" Pumping Station	17,500 00	856 49	16,643 51		16,643 51	16,643 51						
					" Disposal Plant	23,876 00	1,861 98	22,014 02		22,014 02	22,014 02						
					" General City Cement Laboratory	7,400 00	1,357 14	6,042 86		6,042 86	6,042 86						
					" repairing and cleaning sewers	18,000 00	5,964 85	12,035 15		12,035 15	12,035 15						
					Expenses, Pumping Station	11,500 00	875 00	10,625 00		10,625 00	10,625 00						
					" Disposal Plant	6,000 00	6 84	5,993 16		5,993 16	5,993 16						
					" General City Cement Laboratory	500 00		500 00		(a) [illegible]	(a) [illegible]	(b) [illegible]			[illegible]		
					" repairing and cleaning sewers	2,000 00	1,740 66	259 34		259 34	259 34						
					Special expenses	72,412 00	834 98	71,577 02	36,[illegible]	35,[illegible]	71,577 02						
					Construction expenses	6,850,000 00		6,850,000 00	1,375,[illegible] 08	3,680,[illegible]	5,058,888 02	[illegible]					
					Totals	$7,620,808 00	$142,[illegible]	$7,478,148 [illegible]	$1,624,468 [illegible]	$4,062,723 70	[illegible]	(a)(b) $1,792,[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
5 Conduit 1958 Loan	Ch. 165, Acts 1908	No. 142 of 1908	$1,000,000 00	$1,000,000 00	Salaries				$60,812 96		$60,812 96						
					Expenses	$1,000,000 00			919,890 71		919,890 71						
					Totals			$993,762 20	[illegible]		$980,703 67	$13,[illegible]	[illegible]		$993,[illegible] 20		$13,058 53
6 Conduit 1962 Loan	Ch. 27, Acts 1912	No. 162 of 1912	$2,000,000 00	$537,000 00	Salaries	$17,200 00	$1,139 51	$16,060 49		$16,060 49	$16,060 49						
					Expenses	500,000 00	11,111 86	488,888 14		488,888 14	488,888 14						
					Totals	$517,200 00	$12,251 37	$504,948 63		$504,948 63	$504,948 63		$37,976 50	[illegible]	[illegible]	$167,925 13	
7 New School House 1957 Loan	Ch. 552, Acts 1906	No. 240 of 1907	$1,000,000 00	$1,000,000 00	Lot and building, School No. 2	$82,000 00		$82,000 00	$82,000 00		$82,000 00						
					" " " " 6	50,000 00		50,000 00	32,170 17	$17,829 83	50,000 00						
					" " " " 22	66,000 00		66,000 00	66,000 00		66,000 00						
					Building, School No. 49	50,000 00		50,000 00	50,000 00		50,000 00						
					Lot and building, School No. 51	120,000 00		120,000 00	120,000 00		120,000 00						
					Purchase of lot adjoining School No. 54	12,000 00		12,000 00	12,000 00		12,000 00						
					" " " south of School No. 55	6,000 00		6,000 00	6,000 00		6,000 00						
					Lot and building, School No. 59	125,000 00		125,000 00	123,983 71	1,016 29	125,000 00						
					Addition to School No. 60	18,000 00		18,000 00	18,000 00		18,000 00						
					Purchase of lot adjoining School No. 65	5,000 00		5,000 00	5,000 00		5,000 00						
					" " " n. of Balto. st. and w. of Payson st.	6,000 00		6,000 00	6,000 00		6,000 00						
					Lot and building, School No. 70	100,000 00		100,000 00	100,000 00		100,000 00						
					Building, School No. 86	120,000 00		120,000 00	120,000 00		120,000 00						
					Addition to Western High School	125,000 00		125,000 00	125,000 00		125,000 00						
					Lot and building, Polytechnic Institute	109,000 00		108,412 50	108,412 50		108,412 50		$587 50				
					Purchase of lot near Sycamore and Third avenues	6,000 00		6,000 00				$6,000 00					
					Totals	$1,000,000 00		$999,412 50	$974,566 38	$18,846 12	$993,412 50	$6,000 00	$587 50		$999,412 50		$6,000 00
8 School House 1961 Loan	Ch. 92, Acts 1910	No. 556 of 1910	$1,500,000 00	$890,000 00	Addition to School No. 2	$28,102 27		$28,102 27	$28,102 27		$28,102 27						
					Lot and building, School No. [illegible]	41,405 51		41,405 51	37,347 51	$4,058 00	41,405 51						
					Building, School No. 86	547 44		547 44	547 44		547 44						
					" " " 70	21,050 87		21,050 87	21,050 87		21,050 87						
					Polytechnic Institute	364,000 00		364,000 00	241,683 27	90,512 48	332,195 75	$31,804 25					
					Lot and building, School No. 60	34,652 94		34,652 94	31,[illegible]	[illegible]	34,652 94						
					Building, School No. 59	2,479 61		2,479 61		2,479 61	2,479 61						
					Lot and building, School No. 6	86,041 27		86,041 27		79,729 86	79,729 86	6,311 41					
					" " " " 22	155,000 00		155,000 00	2,493 40	152,506 60	155,000 00						
					" " " " 27	125,000 00		125,000 00	7,377 41	101,544 75	108,922 16	16,077 84					
					Addition to School No. 83	100,000 00		100,000 00	54 58	39,233 61	39,288 19	60,711 81					
					" " " 99	56,000 00		56,000 00	55 52	55,944 48	56,000 00						
					Lot and building, Schools Nos. 101 and 111	120,000 00		120,000 00		4,186 37	4,186 37	115,813 63					
					Addition to School No. 63	47,012 24		47,012 24	47,012 24		47,012 24						
					" " " 64	59,940 14		59,940 14	59,940 14		59,940 14						
					Lot and building, School No. 61	75,000 00		75,000 00				75,000 00					
					Addition to School No. 67	67,000 00		67,000 00	50 00		50 00	66,950 00					
					" " " 34	25,000 00		25,000 00				25,000 00					
					" " " 13	[illegible]		[illegible]	[illegible]		[illegible]						
					Purchase of property 1126 East Baltimore street	10,825 21		10,825 21	10,825 21		10,825 21						
					" " lot and erection of building, Belvieu avenue	50,000 00		50,000 00	[illegible]	[illegible]	11,556 47	38,443 53					
(d) Over appropriated, based on par value					Totals	$1,491,092 85		$1,491,092 85	$524,682 11	$530,298 26	$1,054,980 37	$436,112 48	$19,810 31	(d) [illegible]	[illegible]	[illegible]	
9. New Engine House 1967 Loan	Ch. 467½, Acts 1906	No. 239 of 1907	$1,000,000 00	$1,000,000 00	Lot and building, Truck House No. 11	$25,000 00		$25,000 00	$25,000 00		$25,000 00						
					" " " " " " 16	35,000 00		35,000 00	35,000 00		35,000 00						
					" " " Engine " " 34	30,000 00		30,000 00	30,000 00		30,000 00						
					" " " " " " 36	30,000 00		30,000 00	30,000 00		30,000 00						
					" " " " " " 37	30,000 00		30,000 00	30,000 00		30,000 00						
					" " " " " " 38	35,000 00		35,000 00	35,000 00		35,000 00						
					" " " " " " 39	30,000 00		30,000 00	7,198 80		7,198 80	22,801 20					
					" " " " " " 40	30,000 00		30,000 00	7,757 68		7,757 68	22,242 32					
					Pipe line system	719,173 80		719,173 80	719,173 80		719,173 80						
					Fire alarm boxes	20,000 00		20,000 00	20,000 00		20,000 00						
					Building for new fireboat	15,288 70		15,288 70	15,288 70		15,288 70						
					Totals	$999,462 50		$999,462 50	$954,418 98		$954,418 98	$45,043 52	$537 50		$999,462 50		$45,043 52
10 Water 1958 Loan	Ch. 214, Acts 1908	No. 141 of 1908	$5,000,000 00	$2,100,000 00	Salaries, construction, new reservoir	$12,543 55		$12,543 55	$12,543 55		$12,543 55						
					Expenses, construction, new reservoir	155,039 90		155,039 90	149,991 47		149,991 47	$5,048 43					
					New reservoir, gate house	12,000 00		12,000 00	12,000 00		12,000 00						
					Purchase of land and buildings, Gunpowder Valley	177,144 02		177,144 02	177,144 02		177,144 02						
					Extension of water system	3,997,[illegible]	$2,[illegible] 92	1,341,549 08	[illegible]	$814,[illegible]	1,341,549 08						
					Thirty-ninth and Fortieth streets, mains	7,500 00		7,500 00	7,500 00		7,500 00						
					New pumps and boilers, Mt. Royal Pumping Station	200,000 00		200,000 00	[illegible]	$1,[illegible] 21	[illegible]	[illegible]					
					Seventh street, main	[illegible]	3,367 43	36,882 57	36,882 57		[illegible]						
					Harford road, main	7,837 00		7,837 00	7,837 00		[illegible]						
					Salaries, Gunpowder Supply Improvement Division	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]						
					" Filtration Division	37,000 00	15,854 84	21,145 16		21,145 16	21,145 16						
					Totals	$4,723,074 47	$2,702,547 24	$2,020,527 23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
11 Jones Falls Impt. 1961 Loan	Ch. 110, Acts 1910	No. 556 of 1910	$1,000,000 00	$700,000 00	Jones Falls Highway	$1,000,000 00	$707,790 80	$292,209 20	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]		[illegible]
12 Paving 1951 Loan	Ch. 401, Acts 1906 and Ch. 302, Acts 1908	No. 661 of 1911	$5,000,000 00	$2,500,000 00	Salaries, administrative	$17,080 00	$558 59	$16,521 41	[illegible]	$11,[illegible]	$16,521 41						
					" construction	[illegible]	27,[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						
					Testing materials	22,120 00	6,051 10	[illegible]	[illegible]	[illegible]	[illegible]						
					Expenses	3,900 00	1,937 08	[illegible]	[illegible]	831 76	[illegible]						
					Improved paving	[illegible]		[illegible]	507,046 40	[illegible]	[illegible]	[illegible]					
					Totals	$2,500,000 00	$35,934 38	$2,464,065 62	[illegible]	$1,12[illegible]	[illegible]	[illegible]	[illegible]	$2,431,338 74	[illegible]		[illegible]
13 Public Park Impt. 1955 Loan	Ch. 338, Acts 1904	No. 228 of 1905	$1,000,000 00	$1,000,000 00	Extension of park system												
					Northwest section	[illegible]		[illegible]	[illegible]		$247,239 83						
					Southeast "	[illegible]		[illegible]	174,180 64	[illegible]	237,156 91	$10,082 99					
					Northeast "	[illegible]		[illegible]	228,303 07		228,303 07	18,936 14					
					Southwest "	250,000 00		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					
					Totals	$1,000,000 00		[illegible]	[illegible]	$90,433 17	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]

(a) Debit balance of $205 16 charged to construction expenses.
(b) Receipts of $1,531 07 credited to construction expenses.
(c) Credit (b) of $1,531 07 deducted.

PART IV

SCHEDULE B

THE

ASSETS AND LIABILITIES and TAXABLE BASIS

OF THE CITY OF BALTIMORE

AS OF DECEMBER 31, 1913

EXPLANATORY

Heretofore, in preparing the assets and liabilities of the City of Baltimore, the original costs of properties have been used as the basis. It is quite evident that in most cases the cost no longer represents the present market value, and it is only proper that due consideration should be given to changes in the value of lots since acquisition and in the value of buildings since erection, either by way of depreciation or appreciation; and, while a complete and thorough revaluation of city properties has not been made in recent years, a revaluation statement was nevertheless prepared by Thomas J. Lindsay and Alfred D. Bernard, Esquires, Special Assessors of the Appeal Tax Court, early in January, 1911, in a hurried period of ten days, of the market values of all city properties, excepting the following classes of property, namely: New sewerage system, water system, electrical conduit system, fire and police electrical systems, free public baths, public libraries, bridges, public comfort stations, public franchises and easement values and miscellaneous personal property.

Among "miscellaneous personal property" may be included the equipment, horses, carts and machines of the Department of Street Cleaning; furniture and office equipments of the city departments and municipal buildings; library and invaluable records of the City Librarian; libraries of the Appeal Tax Court and Law Department; Bay View Asylum and Hospital outfit; the Tug "Baltimore," the Iceboats "Latrobe" and "Annapolis" and the Launch "Major," under the control of the Harbor Board; the Park Board's machines, machinery and farm and garden implements and utensils; the equipment of Sydenham and Quarantine Hospitals; and numerous other items and articles, all of which are valuable and would increase the assets of the city by many hundreds of thousands of dollars.

In our tables of assets this year we reproduce the findings, with the changes which have subsequently occurred, of Messrs. Lindsay and Bernard, which we have used as the basis, rather than the original costs, as heretofore; and, while the present statement is not entirely satisfactory, we believe it is preferable to using cost figures as the basis. The Comptroller's Department undertook the preparation of a property ledger in 1913, and when this is completed errors which may have crept into the statements of assets and liabilities from year to year will be corrected.

The following is reproduced from Messrs. Lindsay and Bernard's letter, in which they submitted their report to the Appeal Tax Court:

"In computing the values of lots owned by the city, we have considered the present highest utility, from which we have deducted the fair market value of all the ground rents on such portions as are leasehold, and where the properties are improved we have added the cost of the improvements, from which we have deducted depreciation at the rate of 1 per cent. per year for each year of the age of the building, except where buildings were erected between 1895 and 1903, where we have made average increases in construction value before deducting depreciation account.

"In reaching the fair market value of the various parks and squares in the city, we have assumed that the purchasers would develop the tracts to meet the utility of the land, and have put them in at a valuation running from four-fifths to one-quarter of the market value of a single lot. This is based on the theory that a single block of ground would be developed at a profit of 20 per cent., while a tract which might cover a period of twenty years in the development ought to show at least 400 per cent. gross paper profit, to cover loss of area in producing streets and alleys, development expenses and interest.

"We have not considered the value of these tracts at single lot prices, but have assumed a single purchaser for a whole tract.

"In reaching the value of the city's waterfront, we have assumed that the purchasers would pay taxes and have, therefore, capitalized rentals from 7 per cent. to 8 per cent.

"In a scheme so large to make other than an approximate estimate in a short time would be impossible, and we have, therefore, omitted anything like an analysis of values.

"We have, however, valued each property separately, and whenever we deem it necessary, we have given figures and made comment sufficient we trust to make our work intelligible.

"We have also approached the subject in the spirit of the utmost conservatism, and have not been influenced by prices paid for property, simply using these sales as guides, and have resolved all our doubts and misgivings against the city in order that its citizens may have a conservative valuation of the property it owns.

"We have not valued any asset of the city, the sale of which would injure adjoining property irreparably and, therefore, cannot include a number of properties classed as park and squares which are of necessity parts of streets; the sewerage system, conduits, franchise rights and easements are all excluded.

"In fixing acreages of tracts, we have assumed the acreages were given in the Comptroller's report. In a few instances we have made the computation ourselves.

"As it would be impossible for us to make an approximate value of the water system as an entirety, we suggest that it be added as reported to the Comptroller. We have, however, in computing the area of the parks, excluded the acreage of the reservoirs."

The Bureau of State and Municipal Research, in its Report No. 4, presented suggestions for improving the method of reporting the assets and liabilities of the city. This report will be given due consideration in the general study to be made of the city's accounting system, as stated in the letter transmitting the Comptroller's Report to the Mayor and City Council of Baltimore. Some slight changes are, however, made in the present report.

SCHEDULE B

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B—II.	Consolidated Statement of Assets and Liability Accounts.
B—III.	Comptroller's Balance Sheet.
B—III*a*.	City Register's Summary of Cash Receipts, Disbursements and Balances During the Year 1913.
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B—III*c*.	Appropriation Balances (Against Other Assets).
B—IV.	Commissioners of Finance Cash Balances (Sinking Funds).
B—V.	Funded Debt.
B—V Con.	Increase of Funded Debt Authorized, But Not Yet Issued.
B—V*a*.	Accrued Interest on Funded Debt.
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B—XII.	Miscellaneous City Property, Public Buildings and Real Estate.
B—XIII.	Public Schools.
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B—XIX.	New Sewerage System.
B—XX.	Free Public Baths and Public Comfort Stations.
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B—XXII.	The Enoch Pratt Free Library.

SCHEDULE B—I.

Taxable Basis of Baltimore City for the Year 1914.

Assessable at Full Rate ($1.98 per $100):			
Real estate		$352,681,639	
" " (estimated additional)		750,000	$353,431,639
Personal property (individuals, firms and foreign corporations		$49,347,004	
Less plant exemption		4,808,735	44,538,269
Personal property Maryland incorporated companies (est.)		$53,475,114	
Less plant exemption		6,475,114	47,000,000
Distilled spirits in bond (estimated)			900,000
			$445,869,908
Assessable at Fixed Rates:			
Real estate—			
Suburban ($1.30 per $100)	$19,613,033		
" " " " (est. add'l)	150,000	$19,763,033	
Rural (66c. per $100)	$26,887,154		
" " " " (est. additional)	100,000	26,987,154	
Securities (30c. per $100)	$191,970,999		
" " " " (estimated non-stock corporations	1,100,000	193,070,999	
Savings banks' deposits (18¾c. per $100) (estimated)		96,000,000	335,821,186
Total assessable basis			$781,691,094

SUMMARY.

Real estate	$400,181,826	
Personal property	381,509,268	781,691,094

SCHEDULE B—I*a*.

COMPARATIVE STATEMENT OF DEPARTMENTAL APPROPRIATIONS, WITH THE FULL ASSESSABLE BASIS AND THE TAX RATE FOR THE YEARS 1901-1914.

DEPARTMENTS.	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
1. Appeal Tax Court	$26,725 00	$25,225 00	$24,875 00	$165,525 00	$56,449 97	$33,525 00	$33,325 00	$43,925 00	$178,750 00	$68,805 00	$60,450 00	$60,850 00	$69,885 00	$136,375 00
2. Board of Fire Commissioners	496,100 00	496,030 00	590,250 00	564,170 00	622,760 00	765,495 00	896,610 00	1,294,685 00	1,582,289 40	1,151,734 00	978,840 84	1,089,780 00	1,128,569 32	1,034,135 00
3. Board of Park Commissioners	302,675 00	398,650 00	353,168 00	457,000 00	524,800 00	1,472,617 59	1,480,945 82	1,031,323 35	658,178 80	567,255 73	626,890 04	549,737 05	756,411 27	710,281 10
4. Board of Police Commissioners	1,014,440 00	999,661 00	1,011,339 00	1,074,874 00	1,091,763 16	1,088,017 05	1,223,532 33	1,212,049 66	1,279,453 30	1,282,922 23	1,278,891 89	1,272,121 26	1,314,178 50	1,297,760 86
5. Board of Police Examiners	5,032 00	4,482 00	6,182 00	5,482 00	5,482 00	5,442 00	5,377 00	5,352 00	5,667 00	5,697 00	5,712 00	6,102 00	6,102 00	6,102 00
6. Board of School Commissioners	1,226,146 28	1,275,522 00	1,552,365 01	1,573,281 26	1,476,607 28	1,786,983 28	1,890,124 16	2,168,865 81	2,132,525 00	1,951,976 75	2,836,652 75	2,103,137 75	1,972,564 55	2,120,388 00
7. City Collector	34,300 00	334,735 86	34,500 00	36,270 84	35,375 00	37,750 00	42,250 00	37,750 00	38,100 00	39,600 00	42,491 00	76,268 00	80,755 00	89,202 00
8. City Engineer	288,230 00	529,226 75	304,620 00	411,044 34	580,110 00	736,492 24	508,820 25	601,168 93	855,551 34	682,050 67	653,716 05	602,239 23	539,813 97	646,063 42
9. City Librarian	18,418 40	17,919 89	17,350 83	17,399 32	18,265 78	17,438,72	23,407 24	20,128 07	30,145 88	27,020 00	27,215 00	27,515 00	29,172 00	31,307 00
10. City Register	1,681,406 18	.1,647,210 84	1,606,277 96	1,612,421 57	1,734,342 31	1,782,376 00	1,849,168 03	2,132,972 00	2,147,464 00	2,300,413 50	2,489,303 50	2,638,496 30	2,871,124 75	3,188,295 28
11. Collector of Water Rents and Licenses	404,900 00	404,900 00	410,111 00	411,031 84	440,925 00	443,725 00	448,075 00	445,045 00	481,075 00	482,877 00	463,229 35	463,575 00	469,775 00	469,775 00
11½ Commission on City Plan	....	....	....	....	....	....	....	....	....	....	500,000 00	....	....	....
12. Commissioners for Opening Streets	26,714 68	10,234 88	7,072 00	6,971 00	6,971 00	506,971 00	504,900 00	517,608 56	507,400 00	71,985 55	124,502 14	1,011,460 81	1,111,877 48	1,073,354 07
13. Commissioner of Health	84,907 80	88,200 00	88,295 00	91,071 80	98,667 00	152,927 00	123,575 00	154,380 00	149,380 00	174,872 50	223,365 84	203,105 00	218,415 00	242,190 00
14. Commissioner of Street Cleaning	380,748 33	362,990 00	378,279 76	427,502 34	456,764 00	523,857 84	555,514 84	767,579 03	720,800 00	768,660 00	883,676 00	822,658 22	822,658 22	834,878 22
15. Comptroller	24,350 00	50,828 00	35,620 96	24,732 10	36,630 78	31,650 00	27,850 00	42,980 00	53,050 00	47,830 00	57,946 65	49,700 00	54,050 00	57,382 00
16. Courts	201,773 90	194,730 90	198,479 85	197,944 90	214,488 66	212,078 15	216,465 15	220,103 15	235,903 25	227,816 60	240,240 26	235,518 10	323,134 11	284,964 85
17. Department of Legislative Reference	....	....	....	....	....	....	3,200 00	3,710 00	3,510 00	3,630 00	3,630 00	3,690 00	3,690 00	3,690 00
18. Diary City Council	54,973 00	55,585 00	55,585 00	56,105 84	55,585 00	58,875 00	58,056 48	59,085 00	62,085 00	59,085 00	59,085 00	63,447 00	59,685 00	59,185 00
19. Electrical Commission	193,079 75	140,042 74	222,786 22	197,395 84	193,344 00	195,396 00	237,396 00	214,378 48	243,396 00	391,596 00	238,476 00	229,000 00	527,900 00	530,523 00
20. Free Public Bath Commission	12,846 00	14,449 00	17,124 00	19,878 26	21,712 00	29,561 00	61,825 00	48,362 00	80,397 00	58,716 00	64,110 00	88,599 00	77,453 00	81,302 00
21. Harbor Board	77,430 00	74,867 00	77,012 00	65,677 00	114,117 00	1,124,917 00	419,847 00	1,017,546 73	434,758 00	656,264 00	1,120,955 67	1,157,959 00	281,359 00	191,939 00
22. Inspector of Buildings	197,923 00	508,047 00	235,707 39	242,309 01	313,532 57	567,268 00	361,216 41	378,000 00	617,262 00	429,051 18	846,705 33	391,666 18	538,060 00	329,260 00
23. Law Department	33,800 00	24,300 00	25,300 00	25,800 00	33,200 00	40,200 00	52,231 98	44,243 19	56,017 50	49,600 00	50,345 82	48,000 00	47,800 00	47,800 00
24. Liquor License Commission	14,570 65	14,919 50	14,919 50	15,113 50	15,719 96	16,700 00	16,200 00	16,200 00	19,233 33	18,100 00	17,400 00	17,400 00	16,600 00	17,635 00
25. Mayoralty	11,900 00	15,602 00	17,400 00	12,583 34	15,787 14	14,218 00	16,461 74	14,848 00	14,848 00	49,848 00	23,598 00	14,848 00	19,848 00	19,848 00
26. Miscellaneous Annual Appropriations	10,000 00	10,000 00	41,020 20	24,375 00	22,915 80	13,825 00	27,520 00	75,582 49	29,523 00	60,225 00	41,500 00	40,260 00	44,260 00	180,360 00
27. Miscellaneous General Expenditures	72,160 00	61,760 00	69,753 00	71,788 00	74,072 00	72,047 00	72,493 15	82,166 00	86,503 00	103,662 00	132,033 55	138,858 00	140,058 00	205,941 00
28. Municipal Factory Site Commission	....	....	....	....	....	....	....	....	....	....	....	6.000 00	11,000 00	11,000 00
29. Paving Commission	....	....	....	....	....	....	....	....	....	....	500,000 00	1,000,000 00	1,000,000 00	1,000,000 00
30. Reformatories	48,000 00	68,000 00	74,500 00	75,500 00	83,151 00	87,722 00	196,422 00	121,777 00	152,677 00	150,983 00	121,923 00	122,380 00	130,440 00	131,180 00
31. Sewerage Commission	....	....	....	....	....	1,000,000 00	3,681,540 00	2,835,531 00	2,381,321 00	1,427,222 00	1,725,312 00	4,596,881 00	3,023,927 00	1,864,923 00
32. Sinking Funds	507,591 89	512,980 82	513,010 14	479,355 17	527,634 91	620,865 34	667,957 11	858,225 33	717,822 51	733,939 67	769,780 50	948,271 07	989,002 83	971,867 00
33. Superintendent of Lamps and Lighting	348,685 00	341,222 00	336,689 11	333,547 28	311,784 60	275,555 74	278,873 61	314,400 52	346,500 00	364,465 27	374,094 29	395,839 98	463,533 41	542,268 05
34. Superintendent of Public Buildings	72,410 00	80,368 65	81,135 00	88,323 96	84,195 00	87,445 00	86,080 95	104,614 80	92,715 00	93,615 00	103,283 33	88,900 00	81,775 00	82,360 00
35. Supervisors of City Charities	321,720 00	339,995 00	412,850 00	388,005 17	399,029 67	429,233 00	449,700 00	450,972 44	537,750 00	591,709 00	474,684 00	572,118 00	563,546 00	607,194 75
36. Supervisors of Elections	127,300 00	88,286 00	170,198 00	116,995 00	138,753 00	119,203 00	221,325 00	163,401 00	138,421 00	152,928 50	213,745 00	156,003 00	135,971 00	174,637 00
37.• Topographical Survey Commission	6,155 00	6,120 00	6,270 00	6,523 75	11,250 00	11,770 00	11,770 00	12,970 00	12,735 00	12,270 00	14,280 00	13,995 00	15,275 00	35,075 00
38. Visitors to the Jail	68,330 00	58,080 00	54,080 00	53,416 67	55,480 00	58,080 00	91,080 00	62,920 00	62,920 00	63,889 00	65,150 00	64,150 00	63,550 00	64,550 00
39. Water Department	543,200 00	533,698 07	1,102,430 00	793,310 25	968,401 91	585,624 00	807,160 00	1,190,152 64	2,169,875 00	1,794,320 00	2,857,067 00	2,209,510 00	3,409,650 00	3,057,358 32
Total	$8,938,941 86	$9,788,869 90	$10,146,555 93	$10,142,725 35	$10,840,067 50	$15,005,850 95	$17,648,296 25	$18,765,002 18	$19,316,002 31	$17,116,635 15	$21,310,281 80	$23,580,038 95	$23,412,869 41	$22,432,349 92
Full assessable basis	$402,816,097 00	$431,082,122 00	$440,153,153 00	$491,921,328 00	$503,144,182 00	$548,522,063 00	$595,791,882 00	$624,482,590 00	$655,401,372 00	$682,633,316 00	$698,135,168 00	$723,800,340 00	$741,909,312 00	$781,691,094 00
Tax rate	$1.81½	$1.95	$1.8675	$2.06	$2.11½	$2.00	$1.97½	$2.00	$1.95	$1.99	$1.98	$1.89	$2.01	$1.98

SCHEDULE B—II.

Consolidated Statement of Assets and Liability Accounts.

Current Assets:			
Cash, City Register (B-III*a*)		$1,638,692 57	
Uncollected taxes (partly uncollectible) (B-VI)		2,923,711 18	
Uncollected water rents (B-XXI)		189,317 41	
Miscellaneous assets (partly uncollectible) (B-VII)		375,265 22	
Due from bonds authorized, but not issued (B-III*b*)		4,605,288 55	
Current liabilities:			
Salaries and sundry bills (B-VIII)			$1,140,907 45
Temporary loans (B-VIII)			500,000 00
Accrued interest on funded debt (B-V*a*)			957,952 76
Trust funds and special accounts (B-VII)			25,098 91
Appropriation balances (against bonds to be issued) (B-III*b*)			3,824,834 77
Appropriation balances (against other assets) (B-III*c*)			1,362,944 35
Sinking Funds (Assets):			
City stock and certificates in hands of Commissioners of Finance		25,444,459 97	
Accrued interest on city stock in hands of Commissioners of Finance		252,733 79	
Cash in hands of Commissioners of Finance		35,452 74	
Accrued rentals in hands of Commrs. of Finance		8,059 57	
Ground rents on city property		555,947 21	
Funded debt (city stock issued)			78,917,679 50
Fixed Assets (City Property):			
Public Utilities—			
Water works, plant and equipm't	$15,421,865 12		
Public wharves and docks	7,536,744 87		
Electrical conduits, etc	2,983,122 16		
Public markets	1,048,590 00		
Total	$26,990,322 15		
Other Property—			
New sewerage system	15,169,128 00		
Public parks and squares	6,697,867 95		
Miscellaneous	6,453,603 21		
Public schools	7,271,147 70		
Fire Department	3,337,114 53		
Police stations	319,217 00		
Public baths and comfort stations	99,507 81		
Total fixed asset account		66,337,908 35	
Balancing account—"City of Baltimore"			15,637,418 82
Grand totals		$102,366,836 56	$102,366,836 56

SCHEDULE B—III.

Comptroller's Balance Sheet, December 31, 1913.

	Dr.	Cr.
New Sewerage System connections (B-VII)	$173,872 62	
Work in advance of improved paving (B-VII)	54,832 01	
Tax sales (B-VII)	7,448 47	
Private paving and inspection (B-VII)	64,736 68	
City Register, cash account (B-II-III*a*)	1,638,692 57	
Postage stamp account (B-VII)	342 04	
Conduit 1962 Loan	167,925 13	
Dock Improvement 1961 Loan	969,007 99	
Water 1958 Loan	94,354 22	
New Sewerage Improvement 1961 Loan	1,878,537 57	
Dock 1960 Loan	54,595 89	
Annex Improvement 1951 Loan	413,790 23	
School House 1961 Loan	620,903 16	
Paving 1951 Loan	406,174 36	
Opening and closing streets, balances (B-VII)	32,177 86	
Park Board, revenue		$50,000 00
Expenses, parks and squares		5,517 94
New improvements, Park Board		2,014 93
Auxiliary pumping station, Lake Ashburton		10,500 00
Cleaning mains in advance of filtration		14,598 53
Amounts carried forward	$6,577,390 80	$82,631 40

Amounts brought forward	$6,577,390 80	$82,631 40
Repairs to pumping stations		27,722 11
Public comfort stations in markets		20,004 40
Supplying heat and light to City Hall and Court House		2,561 80
Lot and building, Polytechnic Institute		31,804 25
" " " School No. 6		6,311 41
" " " " " 27		16,077 85
Addition to School No. 83		60,711 81
Lot and building, School No. 101		115,813 63
Addition to School No. 67		66,950 00
Lot and building, School No. 61		75,000 00
Addition to School No. 34		25,000 00
Lot and building, Engine House No. 40		22,242 32
" " " " " " 39		22,801 20
Purchase of lot and erection of building, Belvieu ave.		48,443 53
Fireboat "Cataract"		18,697 39
Tractors		6,625 00
Chassis		805 86
Extra work, pumping station		1,020 50
Paving private alleys		3,335 37
Underpinning buildings, Howard street, etc		405 24
Regrading: etc., Howard street, etc		1,284 73
Improvement on Baker street		1,090 00
Temporary loans		500,000 00
Unpaid interest on stock debt (B-VII)		5,740 98
City Property Insurance Fund		2,499 17
Vacuum and cleaning apparatus		3,000 00
Free text-books (B-VII)		920 54
Pensioners (Salaries, Police Department) (B-VII)		9,140 25
Infectious disease hospital		7,290 00
New improvements, Bay View		3,259 06
Lot near Sycamore and Third avenues		6,000 00
" School No. 68		2,334 35
" " " 99		5,070 13
Unclaimed damages, opening streets (B-VII)		584 77
Intestate estates (B VII)		8,712 37
Additional building, Sydenham		29,909 10
Home for superintendent of Sydenham		1,918 32
Lot for new Parental School		3,238 44
New addition, School No. 50		607 80
Playground and open-air classroom, School No. 76		7,500 00
Additional yard space, School No. 106		4,000 00
Equipment and installation of firedoors, Bay View		16,443 70
Cow barns and stables, Bay View		3,389 09
Bungalow for physician, Bay View (T. B.)		55 62
Public Athletic League		1,000 00
Edgar Allan Poe Association		1,000 00
Memorial to F. C. Latrobe		5,000 00
National Junior Republic		500 00
Widening Pratt street, Pratt St. Bridge and property		54,595 89
Commercial and recreation pier		213,718 23
Property and pier, south side harbor		509,281 60
Construction, new reservoir		5,048 43
New pumps and boilers, Mt. Royal Pumping Station		30,512 76
Improved paving		406,174 36
Construction expense, Sewerage Commission		1,791,161 98
Acquiring streets, lanes, alleys, etc., Annex Loan acct.		192,993 90
Extension of park system		52,978 09
Jones' Falls 1961 Loan		360,129 05
Annex Improvement 1951 Loan		101,181 93
Fire Engine House 1957 Loan		45,043 52
School House 1957 Loan		6,000 00
Conduit 1958 Loan		13,056 53
Dock 1960 Loan		44,383 20
Paving 1951 Loan		337,513 10
Surplus		1,127,164 74
	$6,577,390 80	$6,577,390 80

SCHEDULE B—III*a*.

City Register's Summary of Cash Receipts, Disbursements and Balances During the Year 1913.

In Account With the Mayor and City Council of Baltimore.

1913.			Dr.		Cr.
Jan.	1,	To balance	$2,641.771 52		
"	31,	" cash	644,753 43	By cash	$2,289,375 21
Feb.	28,	" "	1,502,035 82	" "	1,653,682 13
Mar.	30,	" "	3,571,759 58	" "	1,960,106 96
Apr.	30,	" "	1,090,212 55	" "	1,633,137 96
May	31,	" "	947,360 57	" "	1,910,762 94
June	29,	" "	6,063,261 25	" "	2,166,147 07
July	31,	" "	1,720,722 75	" "	2,304,543 98
Aug.	31,	" "	2,006,507 27	" "	1,988,279 08
Sept.	30,	" "	485,460 10	" "	1,714,885 53
Oct.	31,	" "	1,148,086 97	" "	2,419,512 13
Nov.	30,	" "	468,401 73	" "	1,853,420 32
Dec.	31,	" "	3,729,554 68	" "	2,487,342 34
				Balance (B-II-III)	1,638,692 57
			$26,019,888 22		$26,019,888 22

SCHEDULE B—III*b*.

Current Assets and Liabilities of Active Loans.

	Due From Bonds Authorized, But Not Issued.	Appropriation Balances Against Bonds To Be Issued.
Conduit 1962 Loan	$167,925 13	....
Dock Improvement 1961 Loan	969,007 99	$722,999 83
Water 1958 Loan	94,354 22	....
New Sewerage 1961 Loan	1,878,537 57	1,791,161 98
Dock 1960 Loan	54,595 89	54,595 89
Annex Improvement 1951 Loan	413,790 23	413,790 23
School House 1961 Loan	620,903 16	436,112 48
Paving 1951 Loan	406,174 36	406,174 36
	$4,605,288 55	$3,824,834 77

SCHEDULE B—III*c*.

Appropriation Balances (Against Other Assets).

Opening and closing streets, credit balances	$41,855 64
Park Board, revenues	50,000 00
Expenses, parks and squares	5,517 94
New improvements, Park Board	2,014 93
Auxiliary pumping station, Lake Ashburton	10,500 00
Cleaning mains in advance of filtration	14,598 53
Repairs to pumping stations	27,722 11
Public comfort stations in markets	20,004 40
Supplying light and heat to City Hall and Court House	2,561 80
Lot and building, Engine House No. 40	22,242 32
" " " " " " 39	22,801 20
Purchase of lot and erection of building, Belvieu avenue	10,000 00
Fireboat "Cataract"	18,697 39
Tractors	6,625 00
Chassis	805 86
Extra work, pumping station	1,020 50
Paving private alleys	3,335 37
Underpinning buildings, Howard street	405 24
Regrading, etc., Howard street	1,284 73
Improvement on Baker street	1,090 00
City Property Insurance Fund	2,499 17
Vacuum Cleaning apparatus	3,000 00
Infectious disease hospital	7,290 00
New improvements, Bay View	3,259 06
Lot near Sycamore and Third avenues	6,000 00
" School No. 68	2,334 35
Amount carried forward	$287,465 54

Amount brought forward	$287,465	54
Lot, School No. 99	5,070	13
Additional building, Sydenham	29,909	10
Home for superintendent of Sydenham	1,918	32
Lot for new Parental School	3,238	44
New addition, School No. 50	607	80
Playground and open-air classroom, School No. 76	7,500	00
Additional yard space, School No. 106	4,000	00
Equipment and installation of firedoors, Bay View	16,443	70
Cow barns and stables, Bay View	3,389	09
Bungalow for physcian, Bay View	55	62
Public Athletic League	1,000	00
Edgar Allan Poe Association	1,000	00
Memorial to F. C. Latrobe	5,000	00
National Junior Republic	500	00
Construction, new reservoir	5,048	43
New pumps and boilers, Mt. Royal Station	30,512	76
Extension of park system	52,978	09
Jones' Falls 1961 Loan	360,129	05
Annex Improvement 1951 Loan	101,181	93
Fire Engine House 1957 Loan	45,043	52
School House 1957 Loan	6,000	00
Conduit 1958 Loan	13,056	53
Dock 1960 Loan	44,383	20
Paving 1951 Loan	337,513	10
	$1,362,944	35

SCHEDULE B—IV.

Commissioners of Finance Cash Balances (Sinking Funds), December 31, 1913.

General Sinking Fund	$2,166	33
Public Park Sinking Fund No. 2	256	40
Burnt District Improvement 1954 Loan Sinking Fund	2,197	20
Redemption Five Million 1890 Loan	200	00
Public Improvement 1940 Loan Sinking Fund	2,220	03
Western Maryland Railroad Sinking Fund	4,822	18
Paving 1951 Loan Sinking Fund	190	27
Internal Improvement 1928 Loan Sinking Fund	2,924	66
Refunding 1940 Loan Sinking Fund	2,211	02
Four Million 1945 Loan Sinking Fund	830	45
Jones' Falls Improvement 1961 Loan Sinking Fund	404	20
Conduit 1922 Loan Sinking Fund	1,322	59
" 1928 " " "	1,910	69
" 1958 " " "	529	18
" 1962 " " "	339	83
School House 1957 Loan Sinking Fund	546	50
" " 1961 " " "	182	50
Funding 1936 Loan Sinking Fund	2,136	71
Public Park Improvement 1955 Loan Sinking Fund	413	39
Water 1916 Loan Sinking Fund	4.181	89
" 1926 " " "	1,371	31
" 1943 " " "	931	54
" 1958 " " "	244	24
New Engine House 1957 Loan Sinking Fund	546	50
Annex Improvement 1951 Loan Sinking Fund	328	06
" " 1954 " " "	281	86
Dock Improvement 1961 Loan Sinking Fund	599	55
Burnt District Improvement 1960 Loan Sinking Fund	202	35
New Sewerage Improvement 1961 Loan Sinking Fund	564	69
" " " 1980 " " "	396	62
	$35,452	74

SCHEDULE B—V.

Funded Debt.

December 31, 1913.

Name of Loan.	Rate.	Authority for Issue.	When Redeemable	Amount.
Water	5 per cent.	Ord. 65, 1877	July 1, 1916	$5,000,000 00
Funding	5 per cent.	" 93, 1878	July 1, 1916	1,000,000 00
McDonogh Ex.....	5 per cent.	" 157, 1890	Sept. 1, 1916	280,000 00
Harford Run......	4 per cent.	" 86, 1879	Jan. 1, 1920	250,000 00
Patterson Park Ex.	4 per cent.	" 120, 1882	Oct. 1, 1920	200,000 00
Paving	4 per cent.	" 140, 1880	Nov. 1, 1920	500,000 00
W. M. R. R........	4 per cent.	" 71, 1882	July 1, 1925	684,000 00
Annex Impvt.....	4 per cent.	" 662, 1911	Aug. 1, 1951	725,000 00
Annex Impvt.....	4 per cent.	" 216, 1905	June 1, 1954	2,000,000 00
Public P'k Impvt.	4 per cent.	" 228, 1905	May 1, 1955	1,000,000 00
Water	4 per cent.	" 82, 1886	Nov. 1, 1926	1,000,000 00
Water	4 per cent.	" 141, 1908	Dec. 1, 1958	2,100,000 00
New Eng'e House.	4 per cent.	" 239, 1907	June 1, 1957	1,000,000 00
New Sch'l House..	4 per cent.	" 240, 1907	June 1, 1957	1,000,000 00
Conduit	4 per cent.	" 142, 1908	Dec. 1, 1958	1,000,000 00
Conduit	4 per cent.	" 162, ...	Aug. 1, 1962	375,000 00
Burnt Dist. Impvt.	4 per cent.	" 391, 1909	Apr. 1, 1960	685,000 00
Jones Falls Impvt.	4 per cent.	" 555, 1910	Mar. 1, 1961	700,000 00
School House.....	4 per cent.	" 556, 1910	Mar. 1, 1961	890,000 00
Dock Impvt......	4 per cent.	" 557, 1910	Mar. 1, 1961	970,000 00
Paving	4 per cent.	" 661, 1911	Aug. 1, 1951	2,500,000 00
New Sew. Impvt..	4 per cent.	" 653, 1911	Aug. 1, 1961	5,975,000 00
Conduit	3½ per cent.	" 120, 1896	Jan. 1, 1922	1,000,000 00
Conduit	3½ per cent.	" 87, 1902	Jan. 1, 1928	1,000,000 00
Internal Impvt....	3½ per cent.	" 98, 1888	July 1, 1928	4,850,000 00
Consolidated	3½ per cent.	" 58, 1890	July 1, 1930	5,000,000 00
Funding	3½ per cent.	" 112, 1896	July 1, 1936	1,453,300 00
Public Impvt......	3½ per cent.	" 100, 1892	Jan. 1, 1940	6,000,000 00
Refunding	3½ per cent.	" 32½, 1898	Jan. 1, 1940	4,300,000 00
Water	3½ per cent.	" 86, 1902	Jan. 1, 1943	1,000,000 00
Four Million......	3½ per cent.	" 137, 1894	Mar. 1, 1945	4,000,000 00
W. M. R. R. Refnd.	3½ per cent.	" 18, 1898 " 32, 1900	Mar. 1, 1950	875,000 00
W. M. R. R. Refnd.	3½ per cent.	" 18, 1898 " 32, 1900	Jan. 1, 1952	1,000,000 00
Burnt Dist. Impvt.	3½ per cent.	" 71, 1904	June 1, 1954	6,000,000 00
New Sew. Impvt..	3½ per cent.	" 227, 1905	Oct. 1, 1980	10,000,000 00
W. M. R. R.......	3¼ per cent.	" 11, 1886	Jan. 1, 1927	1,704,000 00
Gen'l Fund Bonds.	¼ per cent.	" 564, 1910	Mar. 1, 1955	900,000 00
Stock due in 1860.	6 per cent.	Unredeem'd, no int. allowed.		482 00
Water Stock due in 1875.........	6 per cent.	Unredeem'd, no int. allowed.		270 00
Consolidated Stock due in 1890.....	6 per cent.	Unredeem'd, no int. allowed		427 50
Five Million Stock due in 1890.....	6 per cent.	Unredeem'd, no int. allowed.		200 00
		Total funded debt......		$78,917,679 50

SCHEDULE B—V.—*Continued.*

Increase of Funded Debt Authorized, But Not Yet Issued.

Paving 4% 1951 Loan, Ord. No. 661, 1911	$2,500,000 00
Annex Improvement 4% 1951 Loan, Ord. No. 662, 1911	1,775,000 00
General Fund Bonds ¼ of 1% 1955 Loan, Ord. No. 564, 1910	2,100,000 00
Water 4% 1958 Loan, Ord. No. 141, 1908	2,900,000 00
Dock Improvement 4% 1961 Loan, Ord. No. 557, 1910	1,030,000 00
School House 4% 1961 Loan, Ord. No. 556, 1910	610,000 00
Jones' Falls Improvement 4% 1961 Loan, Ord. No. 555, 1910	300,000 00
New Sewerage Improvement 4% 1961 Loan, Ord. No. 653, 1911	4,025,000 00
Conduit 4% 1962 Loan, Ord. No. 162, 1912	1,625,000 00
	$16,865,000 00

SCHEDULE B—V*a*.

Accrued Interest on Funded Debt.

December 31, 1913.

2 months.	$5,000,000 00	Water	1916 Loan 5 %	$41,666 67
2 months.	1,000,000 00	Funding	1916 Loan 5 %	8,333 33
4 months.	280,000 00	McDonogh Ext.	1916 Loan 5 %	4,666 67
6 months.	250,000 00	Harford Run	1920 Loan 4 %	5,000 00
3 months.	200,000 00	**Pat's'n Pk. Ext.**	**1920 Loan 4 %**	2,000 00
2 months.	500,000 00	Paving	1920 Loan 4 %	3,333 33
2 months.	*500,000 00	Water	1922 Loan 4 %	3,333 33
6 months.	684,000 00	W. M. R. R.	1925 Loan 4 %	13,680 00
2 months.	1,000,000 00	Water	1926 Loan 4 %	6,666 67
1 month.	2,100,000 00	Water	1958 Loan 4 %	7,000 00
5 months.	2,500,000 00	Paving	1951 Loan 4 %	41,666 67
5 months.	725,000 00	Annex Imp.	1951 Loan 4 %	12,083 33
1 month.	2,000,000 00	Annex Imp.	1954 Loan 4 %	6,666 67
2 months.	1,000,000 00	Public Pk. Imp.	1955 Loan 4 %	6,666 67
1 month.	1,000,000 00	School House	1957 Loan 4 %	3,333 34
1 month.	1,000,000 00	Engine House	1957 Loan 4 %	3,333 34
1 month.	1,000,000 00	Conduit	1958 Loan 4 %	3,333 33
3 months.	685,000 00	Burnt Dist. Imp.	1960 Loan 4 %	6,850 00
4 months.	700,000 00	Jones Falls Imp.	1961 Loan 4 %	9,333 33
4 months.	890,000 00	School House	1961 Loan 4 %	11,866 66
4 months.	970,000 00	Dock Imp.	1961 Loan 4 %	12,933 33
6 months.	1,000,000 00	Conduit	1922 Loan 3½%	17,500 00
6 months.	4,850,000 00	Internal Imp.	1928 Loan 3½%	84,875 00
6 months.	1,000,000 00	Conduit	1928 Loan 3½%	17,500 00
6 months.	5,000,000 00	**Consolidated**	**1930 Loan 3½%**	87,500 00
6 months.	1,453,300 00	Funding	1936 Loan 3½%	25,432 75
6 months.	6,000,000 00	Public Imp.	1940 Loan 3½%	105,000 00
6 months.	4,300,000 00	Refunding	1940 Loan 3½%	75,250 00
6 months.	1,000,000 00	Water	1943 Loan 3½%	17,500 00
4 months.	4,000,000 00	Four Million	1945 Loan 3½%	46,666 67
4 months	875,000 00	W.M.R.R. R'f'g	1950 Loan 3½%	10,208 33
6 months.	1,000,000 00	W.M.R.R. R'f'g	1952 Loan 3½%	17,500 00
1 month.	6,000,000 00	Burnt Dist. Imp.	1954 Loan 3½%	17,500 00
3 months.	10,000,000 00	New Sew. Imp.	1980 Loan 3½%	87,500 00
6 months.	1,704,000 00	W. M. R. R.	1927 Loan 3¼%	27,690 00
4 months.	900,000 00	G'n F'd Bonds,	1955 Loan ¼ %	750 00
5 months.	5,975,000 00	Sewerage	1961 Loan 4 %	99,583 34
5 months.	375,000 00	Conduit	1962 Loan 4 %	6,250 00
				$957,952 76

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*This loan was redeemed December 31, 1913, although the accrued interest is not payable until 1914 appropriation is available.

SCHEDULE B—V*b*.

Stock and Certificates Held by Commissioners of Finance for Sinking Funds, December 31, 1913.*

Stock:		
Water 1916 Loan, 5%		$1,217,200 00
Funding 1916 Loan, 5%		98,200 00
Harford Run 1920 Loan, 4%		39,100 00
Patterson Park Extension 1920 Loan, 4%		5,000 00
Paving 1920 Loan, 4 %		3,400 00
Western Maryland Railroad 1925 Loan, 4%		179,900 00
Water 1926 Loan, 4%		75,600 00
Paving 1951 Loan, 4%		728,900 00
New Sewerage Improvement 1961 Loan, 4%		391,900 00
School House 1961 Loan, 4%		50,000 00
Conduit 1922 Loan, 3½%		727,000 00
" 1928 " "		870,800 00
Internal Improvement 1928 Loan, 3½%		506,900 00
Consolidated 1930 Loan, 3½%		450,959 97
Funding 1936 Loan, 3½%		161,300 00
Public Improvement 1940 Loan, 3½%		2,423,100 00
Refunding 1940 Loan, 3½%		1,322,700 00
Water 1943 Loan, 3½%		882,300 00
Four Million 1945 Loan, 3½%		2,177,800 00
Western Maryland Railroad Refunding 1950 Loan, 3½%		40,000 00
" " " " 1952 " "		203,000 00
Burnt District Improvement 1954 Loan, 3½%		2,920,300 00
New Sewerage Improvement 1980 Loan, 3½%		3,715,100 00
Western Maryland Railroad 1927 Loan, 3¼%		1,091,000 00
General Fund Bonds 1955 Loan, ¼%		900,000 00
		$21,181,459 97
Certificates of Deposit:		
Mercantile Trust and Deposit Co., 3¼%	$1,979,000 00	
Baltimore Trust Co., 3¼%	1,184,000 00	
Security Storage and Trust Co., 3¼%	60,000 00	
American Bonding Co., 3¼%	200,000 00	
The National Bank of Baltimore, 3¼%	500,000 00	
National Bank of Commerce, 3¼%	340,000 00	
		4,263,000 00
		$25,444,459 97

*Does not include cash (see Schedule B-IV).

SCHEDULE B—Vc.

Accrued Interest on City Stock in the Sinking Funds.

December 31, 1913.

2 months.	$1,217,200 00	Water	1916 Loan	5 %	$10,143 33
2 months.	98,200 00	Funding	1916 Loan	5 %	818 34
6 months.	39,100 00	Harford Run	1920 Loan	4 %	782 00
3 months.	5,000 00	Patterson Park Ext.	1920 Loan	4 %	50 00
2 months.	3,400 00	Paving	1920 Loan	4 %	22 67
6 months.	179,900 00	W. M. R. R.	1925 Loan	4 %	3,598 00
2 months.	75,600 00	Water	1926 Loan	4 %	504 00
6 months.	727,000 00	Conduit	1922 Loan	3½%	12,722 50
6 months.	870,800 00	Conduit	1928 Loan	3½%	15,239 00
6 months.	506,900 00	Internal Impt.	1928 Loan	3½%	8,870 75
6 months.	450,959 97	Consolidated	1930 Loan	3½%	7,891 80
6 months.	161,300 00	Funding	1936 Loan	3½%	2,822 75
6 months.	2,423,100 00	Public Impt.	1940 Loan	3½%	42,404 25
6 months.	1,322,700 00	Refunding	1940 Loan	3½%	23,147 25
6 months.	882,300 00	Water	1943 Loan	3½%	15,440 25
4 months.	2,177,800 00	Four Million	1945 Loan	3½%	25,407 67
4 months.	40,000 00	W. M. R. R. Rfdg.	1950 Loan	3½%	466 66
6 months.	203,000 00	W. M. R. R. Rfdg.	1952 Loan	3½%	3,552 50
1 month.	2,920,300 00	Burnt Dist. Impt.	1954 Loan	3½%	8,517 54
3 months.	3,715,100 00	New Sewerage Impt.	1980 Loan	3½%	32,507 12
6 months.	1,091,000 00	W. M. R. R.	1927 Loan	3¼%	17,728 75
4 months.	900,000 00	General Fund Bonds	1955 Loan	¼%	750 00
5 months.	728,900 00	Paving	1951 Loan	4 %	12,148 33
5 months.	391,900 00	New Sewerage Imp.	1961 Loan	4 %	6,531 67
4 months.	50,000 00	School House	1961 Loan	4 %	666 66
					$252,733 79

SCHEDULE B—*Vd.*

Accrued Rentals of Real Estate and Ground Rents Upon the Books of the Commissioners of Finance, December 31, 1913.

Old Fish House property	$404 72
Fayette and Arch streets	16 00
Pleasant and Calvert streets	25 00
Old City Yard property	96 69
" " " "	750 00
Battery avenue	34 12
Charles and Weyler streets	50 43
Nos. 5-7-9 Weyler street	37 50
" 11 " "	25 20
" 13 " "	14 40
" 15 " "	2 19
" 17 " "	28 51
" 19-21 " "	4 38
" 23 " "	28 51
" 25 " "	2 12
" 27 " "	2 19
" 31-33 " "	30 43
" 35 " "	6 93
" 37 " "	15 24
" 39-41 " "	8 69
" 43 " "	17 10
" 45 " "	2 47
" 49 " "	2 19
Light and Weyler streets	6 50

Purchased by Authority of Ordinance No. 81, 1881:

Park avenue, near Preston street, Boys' Latin School	45 75
Hollins and Monroe streets, School No. 30	139 11
Northeast side Pennsylvania avenue, near Robert street, School No. 21	38 36
Old Frederick road and Fairview avenue, School No. 67	145 00
Waesche street, near Fremont, School No. 110	40 00
Castle street, School No. 77	52 32
Hanover and Lee streets, School No. 4	43 75
Sharp and West streets, School No. 29	47 50
Argyle avenue, near Lanvale street, School No. 91	11 38
Hull and Clement streets, School No. 76	58 32
Linden avenue and Wilson street, School No. 14	280 00
Charles and Ostend streets, School No. 92	62 08
Ann and Chase streets, School No. 94	125 43
Howard street, opposite Centre, Baltimore City College	166 66
Preston and Eden streets, School No. 20	6 66
Broadway and Bank street, School No. 42	61 11
Mosher and Gilmor streets, School No. 11	147 18
Northeast Market	600 00
Collington Square	400 00
Riverside Park	314 22
Holliday and Fayette streets	18 64
Lexington and Paca streets	76 00
Bond street and Ashland avenue, School No. 111	65 00
Carey street and Columbia avenue, School No. 34	128 33
Chappell street, near Carey, School No. 112	157 50
Ramsay and Pulaski streets, School No. 96	96 00
Cross Street Market	162 34
Linden avenue and Konig street, School No. 61	192 50
Perkins Spring Square	513 00
Baltimore street, near Aisquith, School No. 93	66 67
Lombard street, near High, No. 3 Engine House	75 00
Rogers avenue and Low street	157 50
East side Woodberry lane, Annex School No. 7	11 25
Ann and Aliceanna streets, Primary School No. 6	6 36
East side York road, Waverly, No. 7 Truck (Annex Engine No. 4)	34 38
Brunswick street, between Frederick and Wilkens avenues, No. 8 Truck	30 75
Harlem avenue and Monroe street, School No. 78	240 00
Ashland avenue, east of Chester street	43 25
Pennsylvania avenue and Dolphin street, Col. High and Training School	414 35
Chester street and Ashland avenue	204 68
Francis street, between Fulton avenue and Barn alley, School No. 60	180 00
Patterson Park avenue and McElderry street, School No. 13	265 00
Biddle street, near Pennsylvania avenue, School No. 107	250 00
Lehman street and Millington avenue, School No. 68	23 33
Stiles street, near Gough, School No. 2	10 83
Eastern avenue and Streeper street, School No. 47	100 12
Old City Hall, Holliday street, near Lexington	51 00
Caroline street, between Lombard and Pratt streets, School No. 8	89 45
	$8,059 57

SCHEDULE B—*Ve.*

Enoch Pratt Free Library Fund.*

HELD IN TRUST BY THE COMMISSIONERS OF FINANCE, UNDER ORD. NO. 106, 1882.

Water 5% 1916 Loan	$76,900 00	
Funding 5% 1916 Loan	5,500 00	$82,400 00
Paving 4% 1920 Loan	62,300 00	
Patterson Park Extension 4% 1920 Loan	195,000 00	
Harford Run 4% 1920 Loan	900 00	
W. M. R. R. 4% 1925 Loan	6,100 00	
Water 4% 1926 Loan	1,000 00	
Paving 4% 1951 Loan	21,100 00	
New Sewerage Improvement 4% 1961 Loan	8,100 00	294,500 00
Conduit 3½% 1922 Loan	$38,000 00	
" " 1928 "	25,300 00	
Internal Improvement 3½% 1928 Loan	18,200 00	
Consolidated 3½% 1930 Loan	113,200 00	
Funding 3½% 1936 Loan	8,000 00	
Public Improvement 3½ 1940 Loan	204,400 00	
Refunding 3½% 1940 Loan	160,100 00	
Water 3½ 1943 Loan	24,500 00	
Four Million 3½% 1945 Loan	94,400 00	
W. M. R. R. 3½% 1950 Loan	10,000 00	
Burnt District Improvement 3½% 1954 Loan	83,100 00	
New Sewerage Improvement 3½% 1980 Loan	101,100 00	880,300 00
W. M. R. R. 3¼% 1927 Loan		17,900 00
Cash		1,284 85
		$1,276,384 85

*Trust fund and not treated as an asset of the city.

SCHEDULE B—*Vf.*

Horwitz Benevolent Fund.*

HELD IN TRUST BY THE COMMISSIONERS OF FINANCE, UNDER RES. NO. 7, 1881.

Water 5% 1916 Loan	$400 00	
Funding 5% 1916 Loan	2,600 00	$3,000 00
W. M. R. R. 4% 1925 Loan		300 00
Conduit 3½% 1928 Loan	$400 00	
Internal Improvement 3½% 1928 Loan	100 00	
Consolidated 3½% 1930 Loan	1,300 00	
Public Improvement 3½% 1940 Loan	3,000 00	
Refunding 3½% 1940 Loan	6,400 00	
Water 3½% 1943 Loan	700 00	
Four Million 3½% 1945 Loan	1,600 00	
Burnt District Improvement 3½% 1954 Loan	1,100 00	
New Sewerage Improvement 3½% 1980 Loan	600 00	15,200 00
W. M. R. R. 3¼% 1927 Loan		1,500 00
Cash		504 15
		$20,504 15

*Trust fund and not treated as an asset of the city.

SCHEDULE B—*Vg.*

Frederick Raine Fund.*

HELD IN TRUST BY THE COMMISSIONERS OF FINANCE, UNDER RES. NO. 51, 1897.

Public Improvement 3½% 1940 Loan	$400 00

*Trust fund and not treated as an asset of the city.

SCHEDULE B—VI.

Uncollected Taxes as of December 31, 1913.

Year and Class.	Basis.	Rate per $100.	Tax Amount.	Total.
1913.				
Real..........	$51,241,891	$2 01	$1,029,962 01	
Suburban.....	4,905,419	1 30	63,770 45	
Rural.........	6,756,369	67	45,267 67	
Personal......	14,299,739	2 01	287,424 75	
Securities.....	6,749,927	30	20,249 78	
Savings Banks.	61,224	18¾	114 80	
				$1,446,789 46
1912.				
Real..........	20,814,126	1 89	$393,386 98	
Suburban.....	1,895,974	1 26	23,889 27	
Rural.........	2,943,157	65	19,130 52	
Personal......	10,104,863	1 89	190,981 91	
Securities.....	5,258,829	30	15,776 49	
Savings Banks.	30,403	18¾	57 01	
				643,222 18
1911.				
Real..........	5,820,513	1 98	$115,246 16	
Suburban.....	655,199	1 30	8,517 59	
Rural.........	1,312,945	66	8,665 44	
Personal......	7,944,148	1 98	157,294 13	
Securities.....	4,552,343	30	13.657 03	
Savings Banks.	19,183	18¾	35 97	
				303,416 32
1910.				
Real..........	4,043,760	1 99	$80,470 82	
Suburban.....	565,504	1 30	7,351 55	
Rural.........	966,543	66⅓	6,411 40	
Personal......	5,111,078	1 99	101,710 45	
Securities.....	3,793,509	30	11,380 53	
Savings Banks.	9,875	18¾	18 52	
				207,343 27
1909.				
Real..........	4,577,354	1 95	$89,258 40	
Personal......	3,652,785	1 95	71,229 31	
Securities.....	1,713,307	30	5,139 92	
Savings Banks.	13,421	18¾	25 16	
				165,652 79
1908.				
Real..........	5,635,624	2 00	$112,712 48	
Personal......	1,945,886	2 00	38,917 72	
Securities.....	1,865,170	30	5,595 51	
Savings Banks.	32,775	18¾	61 45	
				157,287 16
Total.......	....	....	....	$2,923,711 18

SCHEDULE B—VII.

Miscellaneous Assets and Trust Funds and Special Accounts.

Miscellaneous Assets (Partly Uncollectible):

Tax sales (taxes paid by city on unredeemed property) (B-III)	$7,448 47
New sewerage system connections (advances made by city) (B-III)	173,872 62
Postage stamps on hand, December 31, 1913 (B-III)	342 04
Private paving and inspection (overdraft on Comptroller's ledger. Does not represent outstanding credits on City Engineer's ledger. These exceed the overdraft) (B-III)	64,736 68
Work done in advance of improved paving (Water Engineer's Department) (Overdraft; appropriated for in Ordinance of Estimates for the year 1914) (B-III)	54,832 01
Opening and closing streets (debit balance) (B-III)	74,033 50
	$375,265 32

Trust Funds and Special Accounts:

Uncollected interest on stock debt (B-III)	$5,740 98
Unclaimed damages for opening streets (B-III)	584 77
Free text-books	920 54
Intestate estates	8,712 37
Pensioners (Police Department) (B-III)	9,140 25
	$25,098 91

SCHEDULE B—VIII.

Salaries and Sundry Bills Due December 31, 1913, Not Payable Until January 1, 1914.

		Salaries.	Sundry Bills.
Appeal Tax Court		$2,816 66	$179 75
Board of Fire Commissioners		31,524 15	26,505 80
Board of Park Commissioners		850 65	7,595 04
Board of Police Commissioners		44,976 48	638 48
Board of Police Examiners		400 00	63 13
Board of School Commissioners		766 67	15,461 39
City Collector		3,214 49	1,515 00
City Engineer		2,310 01	26,478 37
City Librarian		219 64	2,937 95
Mayoralty	$500 00		
Law Department	991 67		857 50
City Register	559 17		507,576 25
Comptroller	758 32		380 00
Board of Estimates	16 67		
Assistant Market Master	266 68		
Inspectors of Weights and Measures	300 00		
		3,392 51	
Collector of Water Rents and Licenses		1,259 21	39,967 25
Commissioners for Opening Streets and Annex Improvement Commission		1,538 34	51,000 00
Commissioner of Health		5,633 24	3,585 62
Quarantine		555 00	404 01
Sydenham Hospital		410 83	870 32
Commissioner of Street Cleaning		1,109 20	125 00
Court bailiffs and stenographers		2,166 67	
Criminal Court, State's Attorney, Sheriff, etc			17,119 50
Baltimore City Court			41 50
Court of Common Pleas			1,110 90
Superior Court			2,030 55
Circuit Court			40 00
Orphans' Court		864 00	
Juvenile Court		975 11	15 75
Supreme Bench		1,375 00	20 00
Magistrates		1,750 00	
Trust Department, Supreme Bench			166 10
People's Court		2,019 93	52 50
Department of Legslative Reference		261 66	29 60
Diary City Council		3,437 35	
Amounts carried forward		$113,826 80	$706,767 26

Amounts brought forward	$113,826 80	$706,767 26
Electrical Commission	679 14	34,449 55
Free Public Bath Commission	758 67	1,637 56
Harbor Board	960 91	74,907 61
Inspector of Buildings	2,464 93	55,706 86
Liquor License Commission	916 67	
Coroners	1,500 00	
Baltimore Audit Co.		8,000 00
Municipal Telephone Exchange		1,200 00
Public Service Commission	366 66	
Municipal Factory Site Commission	169 16	100 00
Paving Commission	2,622 49	107,843 16
Sewerage Commission	13,604 81	238,365 23
Superintendent of Lamps and Lighting	699 51	33,433 79
Superintendent of Public Buildings	2,483 27	1,160 65
Supervisors of City Charities	363 33	163 02
Bay View Asylum	2,792 54	25,105 17
Supervisors of Elections	855 04	1,408 66
Topographical Survey Commission	544 99	
Baltimore City Jail	1,502 05	2,400 00
Water Engineer	7,236 27	193,911 69
	$154,347 24	$1,486,560 21
		154,347 24
		$1,640,907 45

SCHEDULE B—IX.

Water Department.

STATEMENT OF LAND, CONSTRUCTION AND REAL ESTATE TO DECEMBER 31, 1913.

	Area.	Cost of Land.	Cost of Construction.	Cost of Buildings.
	A. R. P.			
Lake Montebello	153 2 3	$175,135 00	$961,718 06	$12,795 01
Lake Clifton	44 3 32	33,555 00	692,777 63	3,500 00
Mt. Royal Reservoir	14 3 22	18,809 63	112,352 72	2,000 00
Druid Lake	110	100,394 91	1,234,179 01	....
Hampden Reservoir	20 3 29¾	16,700 00	206,643 53	2,700 00
Western High Service Reservoir	....	....	112,518 57	....
Guilford Reservoir	12 3 29	23,276 25	139,334 49	2,950 00
Loch Raven	1613 0 42³/₁₀	100,218 02	755,825 82	26,234 99
Gunpowder Conduit	....	21,850 25	1,757,760 99	....
Lake Roland	265 1 30	109,682 00	265,534 51	4,000 00
Jones Falls Conduit	20 1 4⁵/₁₀	32,704 00	536,339 35	....
West Arlington Standpipe	3 33	2,500 00	30,000 00	9,667 74
Ashburton Lake	58.66	57,685 51	686,774 15	7,413 56
Old City Hall	....	....	....	30,524 61
Western Pumping Station	....	....	....	53,577 00
Eastern Pumping Station	3 2 37⅕	16,200 00	....	72,660 82
Stable (Gay street yard)	....	....	....	15,368 46
Machine Shop	....	....	....	39,794 53
Store House	....	....	....	30,755 15
Mt. Royal Pumping Station	2 0 35	50,000 00	....	190,891 00
Roland Standpipe	....	4,500 00	48,212 38	....
Blacksmith Shop	....	....	....	1,141 48
Filtration plant	25.32	37,733 80	194,606 28	....
New Loch Raven Dam	2,025.13 1 36	336,258 29	338,145 95	....
Gunpowder Division	....	....	293,671 38	76 40
		$1,137,202 66	$8,366,394 82	$506,050 75
				8,366,394 82
				1,137,202 66

Total land, construction and real estate	$10,009,648 23
Mains laid, 790 miles—4,879 feet	5,412,216 89
Total	$15,421,865 12

SCHEDULE B—X.

Electrical Commission.

AMOUNT AND LOCATION OF TERRA-COTTA AND FIBRE CONDUIT AT THE END OF THE YEAR 1913.

LOCATION—1913.	TOTALS.		GRAND TOTALS.
	Terra-Cotta, Duct Feet.	Fibre, Duct Feet.	Duct Feet.
Pratt st., Lexington st., Woodberry ave., Union ave	874,095.1	131,282.8	1,005,377.9
Parkdale ave., Railroad ave., Monument st			
Patterson Park ave., Baltimore st., Fort ave			
West Falls ave., West st., Dolphin st			
Andre st., Francis st., Granby st., Fayette st			
Eastern ave., Preston st., Frederick road			
Greenmount ave., St. Paul st., Key Highway			
Constitution st., Fremont ave., Reservoir st.,			
Twenty-fifth st., Park ave., Whitelock st., Callow ave			
Reisterstown road, Madison ave., Linden ave			
Fulton ave., Federal st., Retreat st			
Exeter st., Fremont ave., President st	111,392.5	73,100.9	184,493.4
Pratt st., Stiles st., High st., Retreat st			
Druid Hill ave., Madison ave., Park ave			
Fallsway, Broadway, Hillen st., Colvin st	66,943.4	56,455.9	123,399.3
Berford alley, St. Paul st., Exeter st., East st			
Front st., Fayette st., Centre st., Perry st			
Fremont ave., Watson st., Central ave., Fawn st			
Granby st., Laurens st., Maryland ave			
Charles st., Hudson alley, Lexington st			
Monument st., Holliday st., Madison ave			
Light st			

Maryland ave., Twenty-fifth st., Park ave., Hillen st	198,921.2	117,187.4	316,108.6
Aisquith st., Saratoga st., Frederick st			
Guilford ave., Pleasant st., Lombard st			
Parkdale ave., Hudson alley, Etting st., Gay st			
Mason alley, Eutaw st., Mulberry st., Greene st			
Ropewalk lane, Fallsway, McMechen st			
Ensor st., Pratt st., Union ave., Camden st			
Patterson Park ave., Fort ave., Calvert st			
Fremont ave., Fayette st., Howard st			
Rutter st., Dolphin st., Lexington st., Lee st			
Front st., St. Paul st., Exeter st., Charles st			
Monument st., Albemarle st., Central ave			
Eden st., North ave., Mosher st., Morton alley			
Caroline st., Andre st., Adams st., Rutter st			
Jenkins alley, Ridgely st., Foster st., Elder alley			
Eastern ave., Granby st., Baltimore st., Twenty-first st			
Little Monument st., Federal st., Hargrove alley			
Holliday st., Harrison st., Courtland st			
Franklin st., Penn st., Raborg st., Cross st			
Exeter st., Harford ave., Fulton ave., Bank st			
Whitelock st., Reservoir st., Lovegrove alley, Twenty-third st			
Alley east of Francis st., south of Whitelock st.; Light st			
Madison ave., Greenmount ave., President st			
Reisterstown road, Greenway, Braddish ave			
Pennsylvania ave., Key Highway, Hanover st			
University Circle, Colvin st., Tiffany alley			
Stoddard alley, Little Sharp st., Morris alley			
Retreat st., McCulloh st., alley north of Dolphin st			
West of Rutter st., Lombard st., Camel alley, Paca st			
Cathedral st., Frederick ave., Lemmon st			
Brighton st., Jasper st., Hunter alley, Pear alley			
Chase st., Ashland ave., Hampson st., Fawn st			
Mason alley, Druid Hill ave., Moore st., Cecil ave			
Centre st., Linden ave., Broadway, High st			
Laurens st., John st., Vincent st., Bond st			
Dallas st., William st., Philadelphia road, Oak st			
Dickson st., Jordan alley, Stockholm st., Twenty-seventh st			
Constitution st., Fairmount ave., Sharp st			
Shipley st., Forrest st., Watson st., Low st			
Catherine st., Brunt st., Lafayette ave			
Barre st., Division st., Carter alley, John alley			
McAllister st., Brevard st. and sundry alleys			

Charles st., Commerce st., Greenmount ave	20,680.5	10,493.2	31,173.7
Mulberry st., Saratoga st., Pleasant st			
Conway st., Hanover st., Cross st., Bank st			
Frederick st., Calvert st., Henrietta st			
Front st., Davis st., Monument st., Gay st			
Hollingsworth st., Colvin st., Marion st			
Guilford ave., Fayette st., Orchard st			
Lovegrove alley, Biddle st., Grant st., Watts st			
Central ave., German st., Ensor st., Olive st			
Hargrove alley, Holliday st., Patterson Park ave			
Eastern ave., Garrett st., Lexington st			
Federal st., Catherine st., Wolfe st., Falls road			
Sharp st., Howard st., Forrest st., Park ave			
Broadway, Pratt st., North ave., Rutter st			
Lombard st., Exeter st., Light st., John st			
Clay st., Elliott st., Eutaw st., Church st			
Fallsway, Lanvale st., Tiffany alley, South st			
Baltimore st., Caroline st., Madison st			
Centre st., Lemmon st., Columbia ave			
Sutton alley, Morris alley, Constitution st			
Watson st., University Parkway, Uhler alley			
Fremont ave., Braddish ave., Jenkins alley			
Jasper st			
Total	1,272,032.7	388,520.2	1,660,552.9

Duct Laid.				Cost.
1,660,552.9	duct	feet	laid in 1913, gross	$503,477 34
31,173.7	"	"	deducted, special construction	14,589 20
1,629,379.2	"	"	laid in 1913, net	$488,888 14
10,514,091.2	"	"	previously laid	2,494,234 02
12,143,470.4	"	"	total investment as of December 31, 1913	$2,983,122 16

SCHEDULE B—XI.

Wharf Property Owned By the City of Baltimore as of Dec. 31, 1913.

PUBLIC WHARVES AND DOCKS.

Being the system of wharves and docks along Pratt street to Jones Falls and East Falls Avenue Bulkhead.

LOCATION.	Acquired and Constructed.	Cost of Property.	Cost of Construction.	Total.	Lindsay and Bernard Valuation, 1911.
Pratt street bulkhead	1904–1908	....	$34,214 81	$34,214 81	$154,000 00
Pier 1, Pratt street	1904–1908	$264,133 34	121,731 63	385,864 97	496,800 00
Pier 2, Pratt street	1904–1908	516,492 85	154,067 89	670,560 74	640,000 00
Pier 3, Pratt street	1904–1908	384,021 75	165,281 66	549,303 41	772,000 00
Pier 4, Pratt street	1904–1911	194,284 02	346,527 44	540,811 46	*b*540,811 46
Pier 5, Pratt street	1904–1911	889,588 25	372,914 60	1,262,502 85	*b*1,262,502 85
Pier 6, Pratt street	1904–1911	951,363 76	525,856 30	1,477,220 06	*b*1,477,220 06
Pier 7, Lancaster street	1908–1909	....	20,282 58	20,282 58	100,000 00
Pier 8, Lancaster street	1908–1909	....	23,511 28	23,511 28	150,000 00
Pier foot of Calvert street	Ord. 228, 1908	....	863 23	863 23	*b*863 23
Office building, Pier 4	1910	....	4,867 20	4,867 20	*b*4,867 20
East Falls avenue bulkhead	1909	....	219,556 56	219,556 56	*b*219,556 56
Recreation Pier, Broadway	*a*1911–1913	401,373 13	295,728 69	697,101 82	697,101 82
Waterfront street, south side harbor	*a*1911–1913	434,447 22	43,558 60	478,005 82	478,005 82
Pratt street bridge	*a*1911–1913	57,545 63	86,794 24	144,339 87	144,339 87
Totals	....	$4,093,249 95	$2,415,756 71	$6,509,006 66	$7,138,068 87

*a*Not completed. *b*Actual cost figures.

SCHEDULE B—XI.—*Continued.*

MISCELLANEOUS.

Lot foot Aliceanna and President sts		$40,000 00
Lancaster Dock and Caroline st., 120x585		105,300 00
3,000 sq. ft., foot of Point st. to water edge (75 ft. on Point st.)		3,000 00
11,368 sq. ft., foot of Wills st. to water edge (196 ft. on Wills st.)		5,684 00
200 ft. bed of Wills st., approach to water (not valued)		....
127 ft. by 65 ft., foot of South Thames st., to water edge		4,953 00
37 ft. abreast of Bond st., north of water 7 ft., south 43 ft		....
42 " foot of Ann st., bulkhead only (not valued)		....
70 " by 284 ft., foot of East Thames st., to water edge		5,964 00
40 " on Lancaster st., length from building line to water, 307 ft		....
	Annual Rental.	
66 " by 14 ft., foot of Camden st.	$3,618 00	59,400 00
65 " " 14 " " " Barre st.	2,000 00	52,000 00
66 " " 14 " " " Conway st.	3,510 00	49,500 00
66 " foot of Hughes st. (without pier rights)	96 00	1,200 00
82 " " " Montgomery st. (without pier rights)	100 00	1,600 00
50 " " " William st.	25 00	5,000 00
80 " " " Henry st.	60 00	7,500 00
66 " " " Covington st.	120 00	7,500 00
50 " " " Cross st.	100 00	2,500 00
66 " " " Battery ave. and Johnson st	25 00	13,200 00
1,058 ft. east of Jones' Falls, from Granby st. to lower end of Canton Avenue Bridge, 10,580 sq. ft		10,580 00
715 ft. south of Canton Avenue Bridge, 7,150 sq. ft		10,725 00
1,079 ft. south from the lower end of the Falls to Harford Run, included in City Dock lot		....
600 ft. from Harford Run to Caroline st. (included in City Dock lot)		....
82 ft. on Caroline st., north of slip head 78 " " " " south " " " 982 " new wharf, south side Back Basin to corner 325 " from corner of new wharf to bridge 85 " Stone Wharf, outside of bridge on Block st.	13,070 sq. ft.	13,070 00
		$398,676 00
Public wharves and docks		7,138,068 87
		$7,536,744 87

SCHEDULE B—XII.

Miscellaneous City Property—Public Buildings and Real Estate.

	Acquired.	Size of Lot.	Cost.			
			Lot.	Ground Rent.	Building.	Lindsay and Bernard Valuation, 1911.
City Hall	1866	240x155	$116,276 65	$56 00*	$2,271,135 64	$1,295,800 00
Court House	1893	326.9x198.11	435,899 65	....	2,261,110 38	3,772,500 00
Baltimore City Jail	1853	536x200x400	17,500 00	....	337,506 98	473,616 00
Baltimore City Jail workshop	1908	....	....	....	13,658 93	
City Jail, addition	1909	....	....	....	54,131 75	
Bay View Asylum	1862	70⅛ acres.	14,967 15	....	592,778 57	585,467 00
Bay View addition	1903	142 acres.	49,666 97	....	11,313 44	
Ward "A" Building, Bay View	1912	....	....	....	‡158,740 94	
Sydenham Hospital	1908	....	....	....	37,409 16	
Tuberculosis Hospital	1909	....	....	....	20,500 00	....
Eastern Potter's Field	1876	6¼ acres.	1,500 00	....	....	1,250 00
Quarantine Hospital	1859	20 acres.	2,500 00	....	45,492 96	44,119 00
Old Quarantine	1845	180 acres.	2,500 00	....	....	72,000 00
Property Yard	1898	291x130x82	....	540 00*	....	....
Western Potter's Field	1872	14$^2/_{10}$ acres.	2,500 00	....	....	2,840 00
City Morgue	1893	18x71	2,000 00	....	5,000 00	6,806 00
Fourth Regiment Armory	1856	144x98	....	1,188 00	60,000 00	26,412 00
Boys' Latin School lot	1881	91.6x150	....	549 00*	....	....
Old City Hall, Holliday street	....	52x107⅓	....	306 00*	....	7,750 00
Lot, Hunter alley, near Mt. Royal avenue	1907	104x60	7,000 00	....	....	2,600 00
Street Cleaning Dept.—Granby street	1910	40x100	2,543 21	....	†45,000 00	†47,543 21
Ridgely Street Stables	1911	150x155	7,856 25	....	24,534 18	*a*32,390 43
Greenmount Avenue Stables	1911	65x151	4,300 00	....	22,309 57	*a*26,609 57
City Yard, opposite Boyle street, at Clement street, to water line	1832	....	made ground.	....	....	30,000 00
Boys' Home, Pleasant and Cal. sts., g. r.	1869	....	....	....	....	1,250 00
Old police station, Guilford avenue, near Lexington street (City Hall Annex)	1869	48.4x98	17,000 00	120 00	19,783 82	24,650 00
Totals	....	....	$684,009 88	$2,759 00	$5,980,406 32	$6,453,603 21

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*Owned by Comm. of Finance and deducted in Lindsay & Bernard's Valuation, 1911, and listed as asset of Sink. Fd. in Schedule B-XVIII.

*a*Actual cost, not included in Lindsay & Bernard's Valuation, 1911.

†Approximated, not included in Lindsay & Bernard's Valuation, 1911.

‡Building completed, but all payments not made.

SCHEDULE B—XIII.

Public Schools.

SCHOOL.	Location.	Erected.	Size of Lot.	Ground Rent.	Cost.		Lindsay & Bernard Valuation, 1911.
					Lot.	Building.	
Administration Bldg.	Madison and Lafayette avenues	1895	104.8 x230	....	....	$40,000 00	$268,866 00
Western High School	McCulloh street and Lafayette avenue	1895	97.9 x230	....	$70,666 66	82,000 00	
Western High School	Addition	1909	100 x 90	....	18,584 68	165,837 38	
Balto. City College.	Howard street, near Centre.	1896	208.6 x245	$1,000 00* 3,600 00	....	203,639 00	287,990 00
Eastern High School	Broadway and North avenue	1904	189 x200	....	31,679 37	365,506 54	373,350 00
New Polytecnic Ins.	North and Guilford avenues.	1909	303 x484 303 x182	....	368,234 68	622,123 57	*d*990,358 25
Colored High School	Penna. avenue and Dolphin street	1893	144½ x 80	1.147 50*	....	26,000 00	35,412 00
School No. 1	N. E. Cor. Fayette and Greene streets	1880	97 x102	354 00	9,000 00	25,000 00	26,900 00
School No. 2	Gough and Stiles streets	1909	220 x 82	50 00* 200 00	26,897 99	111,647 70	*d*138,545 69
School No. 3	Eastern and Montford avenues	1880	100 x150	350 00	....	24,000 00	14,550 00
School No. 4	Hanover and Lee streets	1896	50 x104 128 x 76	210 00* 135 00	18,000 00	35,000 00	*b*48,418 80
School No. 4	Addition	1910	25 x 81	....	8,203 30	....	
School No. 5	Broadway and Ashland avenue	1876	120 x120	600 00	....	18,000 00	12,360 00
School No. 6	Ann street, near Canton avenue	1912	144 x183	22 50* 90 00	38,938 73	127,591 13	*d*166,529 86

School No. 7	Millikin street, near Aisquith	1864	75.9 x100	....	....	5,000 00	4,875 00
School No. 8	Caroline street, near Lombard	1888	105½ x150	221 34	6,200 00	18,000 00	18,851 00
School No. 9	S. W. Cor Fayette and Greene streets	1875	77½ x170	1,094 75	....	27,000 00	5,307 00
School No. 10	Hollins street, near Schroeder	1855	143.9 x134	200 00	13,217 71	75,000 00	72,188 00
School No. 11	Gilmor and Mosher streets	1886	126.10x166.10	757 00*	....	42,000 00	23,553 00
School No. 12	Barre and Warner streets	1870	67 x120	268 00	....	16,000 00	6,920 00
School No. 13	Patterson Park avenue and McElderry street	1890	155 x115	530 00	10,000 00	21,000 00	18,587 00
School No. 13	Addition	1912	....	....	....	22,035 35	*d*22,035 35
School No. 14	Linden avenue and Wilson street	1882	150 x105	840 00*	....	21,000 00	9,660 00
School No. 15	Saratoga street and Carrollton avenue	1872	100 x150	700 00	....	24,000 00	8,000 00
School No. 16	Harford and Ashland avenues	1876	105 x180	790 00	....	17,000 00	....
School No. 19	Hollins street, near Monroe	1875	87½x129	375 00*	....	18,000 00	11,250 00
School No. 20	Eden and Preston streets	1868	100 x207	80 00* 512 00	6,000 00	43,000 00	20,200 00
School No. 21	Penna. avenue and Robert street	1869	80 x156	86 00* 234 00	....	16,000 00	9,500 00
School No. 22	Ramsay and Scott streets (vacant)	1865	71 x128½	177 50	150 00	15,000 00	4,112 00
School No. 22	Hamburg and Scott streets	1912	164 x200	....	60,741 22	161,222 17	*d*221,963 39
School No. 23	Gough and Wolfe streets	1866	75 x110	150 00	2,983 33	19,000 00	12,375 00
School No. 24	Fait avenue and Patuxent street	1890	150 x100	....	7,500 00	21,000 00	26,000 00
School No. 25	Bond street, near Canton avenue	1867	110 x129½	....	14,962 50	25,000 00	21,475 00
School No. 26	Orleans and Bond streets	1874	84 x 75	126 00	....	15,000 00	8,790 00
School No. 27	Fayette and Chester streets	1912	115 x182⅔	274 50	32,793 36	108,922 19	*d*141,715 55
School No. 28	Battery avenue and Clement street	1869	75 x 82	157 50* 112 50	1,000 00	7,500 00	625 00
School No. 29	Sharp street, near West	1886	114 x155	570 00*	....	21,600 00	8,880 00

School No. 30	Hollins street, near Monroe	1875 1902	111	x129	375 00*	4,250 00	16,000,00	7,175 00
School No. 31	Schroeder and Pierce streets	1890	60	x124	48 00 180 00	2,500 00	21,000 00	20,700 00
School No. 32	Guilford avenue and Lanvale street	1890	80	x154	.....	11,800 00	21,000 00	30,000 00
School No. 33	Light and Clement streets	1890	100	x100	.....	10,000 00	21,000 00	30,000 00
School No. 34	Carey street and Columbia avenue	1896	100	x160	385 00*	.....	30,000 00	31,584 00
School No. 35	Hanover and Winder streets	1895	132	x198	.....	6,700 00	28,297 00	33,960 00
School No. 37	Biddle street and Patterson Park avenue	1895	165	x150	.....	8,500 00	25,000 00	36,900 00
School No. 38	Chesapeake and Hudson sts.	1853	80	x100	.....	(Donated)	5,000 00	5,000 00
School No. 39	Carrollton and Riggs avenues	1888	97	x157	.....	7,000 00	19,000 00	26,790 00
School No. 40	Aisquith and Mullikin streets	1868	141 ½	x210	615 90	15,591 66	80,000 00	33,752 00
School No. 42	Broadway and Bank street	1888	100	x141	44 44 200 00*	.....	30,000 00	43,889 00
School No. 43	High street, near Fayette	1875	80	x167	900 00	.....	28,800 00	1,000 00
School No. 43 Brch.	124-6 N. High street	1903	30	x136.6	.....	.....	**5,000 00	
School No. 44	Sharp street, near Montgomery	1869	100	x155	600 00	.....	18,000 00	2,500 00
School No. 45	Greenmount avenue and Eager street	1872	66	x152	600 00	.....	17,000 00	950 00
School No. 46	Division and Lanvale streets	1877	104 ½	x 171 ¼	800 00	.....	28,255 66	1,225 00
School No. 47	Eastern avenue and Patuxent street	1897	144	x300	1,001 00*	.....	50,000 00	61,517 00
School No. 48	Hollins and Monroe streets	1875	127 ½	x 129 ½	700 00	.....	21,000 00	4,120 00
School No. 49	Cathedral and Biddle streets	1908	60	x230	.....	.....	**60,000 00	78,000 00
School No. 50	Gorsuch avenue and Homestead	1889	42	x 90	.....	1,000 00	4,500 00	3,260 00
Repair Shop	York Road, Waverly	1889	100	x200	.....	4,000 00	14,500 00	16,000 00
School No. 51	New building, Windemere avenue	1911	516	x242	.....	16,122 45	162,401 84	*d*178,524 29
School No. 52	Oak and Twenty-fifth streets	1889	60	x160	.....	4,000 00	10,000 00	11,000 00

School No. 53......	St. Paul and Twenty-sixth streets	1897	200 x123	....	21,713 41	60,000 00	89,000 00
School No. 54......	Huntington avenue, near Charles, with addition....	1890 1908	220 x150	....	7,000 00 10,000 00	38,000 00	62,000 00
School No. 55......	Chestnut and Fourth avenues	1890	176 x220	....	5,000 00	44,433 12 46,769 42	105,840 00
School No. 55......	Addition	1902	120 x 48	....	1,200 00		
School No. 55......	Addition to the "Pitt" lot..	....	175 x225	....	6,075 68	....	2,541 00
School No. 57......	Church street, near Merryman's lane	1889	88 x245½	....	1,300 00	700 00	6,113 00
School No. 58......	Woodberry avenue, Woodberry	1889	45 x130	22 50*	....	10,000 00	120,940 00
School No. 59......	Reisterstown Road and Fifth avenue	1908	297 x241 401 x150	....	5,611 95	121,867 66	*d*127,479 61
School No. 60......	Francis and Clifton streets..	1893	40 x150 150 x200	30 00 450 00*	....	35,539 00	*g*65,102 94
School No. 60......	Addition	1908	....	....	....	4,208 30	
School No. 60......	Addition	1910	61.6 x150	....	5,186 13	57,439 81	
School No. 60 Br...	Clifton street, near Pennsylvania avenue	....	40 x150	....	**Nominal.**	....	....
School No. 61......	Linden avenue and Koenig street	1897	165 x150	1,155 00*	....	54,000 00	60,550 00
School No. 62......	Walbrook avenue and Smallwood street	1902	150 x210	....	5,000 00	65,203 81	89,850 00
School No. 63......	Ninth and Northwest streets	1894	128 x226.6	....	4,718 66	74,525 46	*d*79,244 12
School No. 64......	Garrison avenue and Main avenue	1905	192½ x323	....	6,251 95	97,280 08	*d* 103,532 03
School No. 65......	Calverton, Bloomingdale road.	1893 1908	291¼ x171 5-6	....	1,500 00 5,000 00	15,500 00	17,280 00
School No. 65......	Additional lots						
School No. 66......	Old Frederick road, Thirteenth and Carroll	1892	61 x238	....	2,000 00	4,500 00	3,720 00
School No. 67......	Old Frederick road, Fairview	1892	150 x257	360 00*	....	15,000 00	11,140 00
School No. 68......	Millington and Lehman ave.	1892 1910	80 x200	240 00*		21,000 00	18,000 00
School **No. 68**......	Addition				6,532 65	....	
School No. 70......	William st. and Warren ave..	1911	188.5 x140	175 00	36,032 33	130,248 04	*d*166,280 37
School No. 71......	Bond and Jefferson streets..	1884	70 x152.5	19 00	8,700 00	20,000 00	19,725 00

School No. 72......	Ridgely street, near Fremont avenue...............	1877	124.5 x155	620 62	....	47,655 51	*f*32,610 51
School No. 73......	Aisquith street, near Lexington	1870	100 x152	25 00	17,100 00	20,000 00	18,875 00
School No. 74......	Twenty-second and Cromwell streets...............	1902	200 x246	....	7,000 00	71,110 47	98,500 00
School No. 75......	Carrollton avenue and Lexington street.............	1886	191 x160 1-3	400 00	10,000 00	40,000 00	37,550 00
School No. 76......	Clement and Hull streets...	1882	100 x153	350 00*	....	18,000 00	*j*21,768 94
School No. 76......	Addition	....	....	....	....	27,809 88	
School No. 77......	Washington and Fayette streets	1871	93 x134	372 00 209 25*	....	20,000 00	4,329 00
School No. 78......	Harlem avenue and Monroe street	1893	167 x249½	480 00*	800 00	30,500 00	41,465 00
School No. 79......	Park avenue and Hoffman street	1892	120 x150	1,020 00	....	35,000 00	30,600 00
School No. 80......	Eden and Federal streets...	1890	100 x180	....	8,000 00	33,000 00	44,000 00
School No. 81......	Gilmor and Presstman streets	1875	155.6 x116.5	620 00	....	18,350 00	8,808 00
School No. 82......	Mulberry street, near Fremont avenue...............	1868	87.8 x134	350 67	....	15,000 00	4,616 00
School No. 83......	Lakewood avenue and Orleans street................	1907	343 x145	....	15,452 86	102,688 56	*d*118,141 42
School No. 84......	Johnson and Heath streets..	1902	148¼ x214½	....	10,000 00	69,218 35	96,853 00
School No. 85......	Lakewood avenue and Oliver street	1904	150 x320¼	....	4,440 05	92,296 85	100,000 00
School No. 86......	Mulberry and Payson streets	1908	190 x160	....	6,000 00	133,149 84	*d*147,187 57
School No. 86......	Additional lots..............	1910			8,037 73		
School No. 91......	Argyle avenue, near Lanvale street	1858	80 x140	120 00* 195 00	....	13,000 00	2,325 00
School No. 92......	Charles and Ostend streets.	1882	91.6½x219.2	372 50*	....	28,000 00	26,113 00
School No. 92......	Addition	....		....	2,305 50	....	....
School No. 93......	Baltimore street, near Aisquith	1879	120 x170	300 00* 1,000 00	5,000 00	28,000 00	5,500 00
School No. 93......	Addition	1912	30 x170	....	10,825 21	....	*d*10,825 21
School No. 94......	Chase and McDonogh streets	1882	80 x223	501 75*	....	38,675 00	24,443 00

School No. 95	Lexington street, near Fremont avenue	1890	81 x220.6	....	15,000 00	25,000 00	37,150 00
School No. 96	Ramsay and Smallwood streets	1895	357 x231	480 00*	4,000 00	90,267 23	119,850 00
School No. 98	Ramsay and Pulaski streets					31,617 77	
School No. 99	North avenue and Washington street	1910	120 x250	....	13,363 37	81,344 48	*d*94,707 85
School No. 100	Mount and Saratoga streets	1896	151 x156	....	10,000 00	63,315 16	89,060 00
School No. 101	Jefferson street, near Caroline	1855	83½ x 80	200 00	1,350 00	5,000 00	....
School No. 103	Division and Lanvale streets	1877	104.2 x171¼	800 00	....	28,255 66	....
School No. 105	Rogers avenue, near Lexington street	1874	75 x105	25 00	5,025 00	14,000 00	9,250 00
School No. 106	Hill and Sharp streets	1893	99 x155	192 00	16,000 00	27,000 00	29,150 00
School No. 107	Biddle street, near Pennsylvanie avenue	1870	70 x150	70 00	15,000 00	10,000 00	7,250 00
School No. 108	Caroline street, near Bank	1867	76 x 90	134 00	4,800 00	8,000 00	3,310 00
School No. 109	Fremont avenue, near Lombard street	1843	75 x157	....	1,200 00	8,000 00	15,000 00
School No. 110	Waesche street, near Fremont avenue	1877	143¾ x120	480 00*	....	22,000 00	10,430 00
School No. 111	Bond street, near Ashland avenue	1864	80 x 80	130 00*	1,200 00	7,000 00	3,050 00
School No. 112	Carey and Chappell streets	1897	129¾ x135	630 00*	....	40,408 70	44,040 00
School No. 113	Girard avenue and Sherman	1895	120 x124	....	7,200 00	23,968 00	34,200 00
School No. 115	Merryman's lane, Waverly	1889	32½ x127-5	50 00	750 00	4,500 00	1,900 00
School No. 116	Druid Hill avenue, near Biddle street	1841	75 x100	150 00	....	12,000 00	4,250 00
Chester street and Ashland avenue		1898 1900	200 x133	829 75*	4,750 00	....	....
Pennsylvania avenue and Biddle street		1898	92.2 x200	1,500 00*	....	....	....
North of Orem lane, lot		1907	180 x134	....	15,000 00	....	15,300 00

Parental School, Old Frederick road	1907	400 x416 370 x353		7,009 30		8,320 00
Frederick road, west of Millington lane, lot		40 x289	50 00			
Parental School, Catonsville					**11,649 30	*d*11,649 30
Totals			$37,573 47	$1,202,649 42	$5,632,374 99	$6,258,705 05
Equipment of Schools:						
1,745 classrooms in the elementary schools, estimated cost of equipping office, teachers' room, manual training room, cookery, kindergarten and assembly hall at $400					$698,000 00	
4 secondary schools at $50,000, exclusive of supplies, but including laboratory tables, gymnasium apparatus lockers, etc.					*k*200,000 00	
One-fifth Polytechnic Institute					114,442 65	
					k$1,012,442 65	1,012,442 65
Grand total valuation						$7,271,147 70

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*Owned by Commissioners of Finance and deducted in Lindsay and Bernard valuation, 1911, and listed as assets of Sinking Fund in Schedule B—XVIII.

**Lot and building.

*b*Includes $1,513.80 for lot purchased in 1911 after Lindsay and Bernard valuation.

*d*Actual cost; not included in Lindsay and Bernard valuation, 1911.

*f*Includes 22,655.51 expended in 1911 after Lindsay and Bernard valuation.

*g*Includes 34,652.94 expended in 1911 after Lindsay and Bernard valuation.

*j*Includes 10,601.94 expended in 1911 after Lindsay and Bernard valuation.

*k*Figures supplied by Mr. Henry R. Davis, Supervisor of School Buildings; the same being estimated.

SCHEDULE B—XV.

Public Parks and Squares.

December 31, 1913.

PARKS AND SQUARES.	Acquired.	Acreage.	Ground Rent.	Cost.	Lindsay & Bernard. Valuation. 1911.
Mt. Vernon Squares (2)	1815	1.4		Donated.	Not valued†
Washington Place Squares (2)	1815	.9		Donated.	Not valued†
Eastern City Spring Square	1818	1.3		$15,000 00	$15,750 00
Patterson Park	1827	128.44		465,157 29	513,760 00
Franklin Square	1839	2.3		10,000 00	45,067 00
Jackson Square	1844	.6		Donated.	Not valued†
Union Square	1847	2.0		Donated.	33,800 00
Broadway Squares (19)	1851	5.7		28,661 48	Not valued†
Ashland Square	1851	.01		200 00	Not valued†
Madison Square	1853	3.4		30,000 00	35,000 00
Eutaw Place Squares (9)	1853	5.6		60,000 00	Not valued†
Lafayette Square	1859	2.9		15,000 00	49,500 00
Druid Hill Park	1860	674.16		720,760 53	3,360,000 00‡
Park Place Squares ((5)	1860	1.7		Donated.	Not Valued.*a*
Riverside Park	1862	17.2	$3,770.62*		13,235 00
Fulton Avenue Squares (17)	1866	4.0		Donated.	Not valued†
Harlem Park	1869	9.05		Donated.	110,700 00
Wilkens Avenue Squares (7)	1870	1.6		30,000 00	Not valued†
Perkins Spring Square	1873	1.5	2,052.00*		¶
Mt. Royal Squares (7)	1874	2.0		9,790 28	Not valued†
Johnson Square	1877	2.5		$20,000 00	$24,000 00
Federal Hill Park	1879	8.42	$37.50	106,135 46	79,662 00
Collington Square	1880	5.0	960.00*		32,000 00
Liberty Triangle	1880	.02		Donated.	Not valued†
Tancy Place Squares (2)	1881	.8		Donated.	Not valued†

SCHEDULE B—XIV.

Fire Department Property—Engine Houses, Equipment, Engines and Fire Boats.

Companies	Acquired.	Location.	Size of Lot. (Feet.)	Cost.		Ground Rent.	Lindsay and Bernard Valuation, 1911.	Estimated Value of Equipment, Dec. 31, 1913.
				Building.	Lot.			
No. 1 Engine Co.	1907	Paca and Mulberry streets	140 x 41⅓	$44,997 01	$14,506 90		$49,787 00	$13,177 00
No. 2 Engine Co.	1859	Barre street, near Sharp	92 x 25	10,000 00	1,400 00	$62 50	4,688 00	14,425 00
No. 3 Engine Co.	1859	Lombard street, near High	100 x 23	8,000 00	3,333 33	150 00*	3,090 00	14,327 00
No. 4 Engine Co.	1859	Lexington street, near North	120x21-9½	13,000 00	1,924 16		14,335 00	25,360 00
No. 5 Engine Co.	1859	Ann street, near Lombard	140 x 34	15,000 00	8,314 00		9,030 00	17,387 00
No. 6 Engine Co.	1859	Gay and Ensor streets	107-2 x 48-8	22,000 00	10,000 00	62 00	12,129 00	15,285 00
No. 7 Engine Co.	1859	Eutaw street and Druid Hill avenue	33 x 57	13,000 00	3,500 00	27 00	17,825 00	14,017 00
No. 8 Engine Co.	1871	Mulberry street, near Schroeder	120 x 23	10,000 00	2,350 00		6,920 00	12,300 00
No. 9 Engine Co.	1872	Madison street, near Broadway	150 x 33	12,000 00	2,640 00		8,485 00	22,337 00
No. 10 Engine Co.	1872	Columbia avenue, near Poppleton street	100 x 22	12,000 00	1,173 33		7,880 00	12,735 00
No. 11 Engine Co.	1874	Eastern and Patterson Park avenues	64 x 28	12,000 00		123 75	6,097 00	13,446 00
No. 12 Engine Co.	1875	Fort and Riverside avenues	125 x 25	12,000 00		150 00	4,750 00	13,269 00
No. 13 Engine Co.	1876	Myrtle and Fremont avenues	192-6x180x68	19,463 00	2,500 00		15,887 00	15,173 00
No. 14 Engine Co.	1888	Hollins street, near Monroe	62-5¼x130-3½	14,000 00	3,000 00		15,500 00	14,922 00
No. 15 Engine Co.	1890	Lombard street, near Howard	170 x 33	20,000 00	10,000 00		27,900 00	24,913 00
No. 16 Engine Co.	1909	Foot of President street		13,965 00			35,000 00	c65,000 00
No. 17 Engine Co.	1895	Fort avenue and Haubert street	51-8 x 97	13,000 00	2,150 00		17,583 00	17,672 00
No. 18 Engine Co.	1892	Twenty-first street, near Maryland avenue	140 x 36	13,600 00	3,400 00		16,440 00	17,532 00
No. 19 Engine Co.	1895	North avenue and Bond street	120 x 40	16,000 00	4,000 00		22,600 00	14,032 00
No. 20 Engine Co.	1896	North avenue and Tenth street	110 x 60	16,059 00	1,500 00		22,000 00	12,176 00
No. 21 Engine Co.	1897	Roland avenue and Oliver Place	90 x 50	15,000 00	2,500 00		20,000 00	12,042 00
No. 22 Engine Co.	1901	Patuxent and O'Donnell streets	120 x 60	21,846 00	3,000 00		31,000 00	12,102 00
No. 23 Engine Co.	1902	Saratoga street, near Howard	80 x 50	22,354 75	23,145 25		40,000 00	19,810 00
No. 24 Engine Co.	1903	Patterson Park avenue and Orleans street	85 x 25	16,500 00	3,500 00		20,000 00	9,962 00
No. 25 Engine Co.	1903	Gold and McCulloh streets	37½x120	31,136 13	3,020 00		37,812 00	15,750 00
No. 26 Engine Co.	1905	Leadenhall and West streets	40 x100	20,065 16	2,434 84		21,600 00	13,312 00
No. 27 Engine Co.	1905	Columbia ave., near Little Greene street	168-5½x 46	17,900 00	8,100 00		21,600 00	20,909 00
No. 28 Engine Co.	1906	Guilford and Mt. Royal avenues	45x115.9x147.1	23,526 25	8,473 75		27,500 00	20,284 00
No. 29 Engine Co.	1906	Park Heights and Kate avenues	60.3 x125	28,077 93	2,083 10		29,910 00	13,205 00
No. 30 Engine Co.	1907	Frederick avenue, near B. & P. R. R.	72 x150 63.6x147.5	28,901 05	4,388 75		31,100 00	9,995 00
No. 31 Engine Co.	1901	York road above Thirty-first street	50 x 150	17,677 33	4,737 23	75 00*	21,625 00	9,496 00
No. 32 Engine Co.	1907	South Gay street, near Baltimore	122½x 66	29,671 57	29,893 43		e52,100 00	16,967 00
No. 33 Engine Co.	1904	Harford avenue and Oliver street	34-3¼x94x90x 98-11	28,098 96	4,576 01		31,460 00	12,312 00
No. 34 Engine Co.	1908	Caroline street, near Gough	37-7x100	24,951 98	5,048 02		24,379 00	12,880 00
No. 36 Engine Co.	1909	Edmondson avenue and Bentalou street	50 x187	27,791 42	3,043 75		28,000 00	9,502 00
No. 37 Engine Co.	1909	Ridgely and West streets	50 x155	24,040 38	3,800 72		27,500 00	12,535 00
No. 38 Engine Co.	1909	Baltimore and Fremont streets	45-7x153-2	23,936 30	11,063 70		30,698 00	12,921 00
No. 39 Engine Co.	1909	See No. 16 Engine Company						d 120,395 00
No. 40 Engine Co.	1912	See No. 12 Truck Company						5,721 00
High Pressure Service	1909	Pumping Station (South street) and Pipe	69-3½x137	152,091 06	32,633 40			a970,538 82
No. 1 H. and L. Co.	1907	See No. 32 Engine Company						14,228 00
No. 2 H. and L. Co.	1859	Paca and Fayette streets	150 x 33	26,715 08	5,000 00	105 00*	25,325 00	15,907 00
No. 3 H. and L. Co.	1859	See No. 5 Engine Company						7,616 00
No. 4 H. and L. Co.	1907	McCulloh street, near Biddle	100 x 42	24,935 00	7,265 00		26,600 00	9,841 00
No. 5 H. and L. Co.	1904	See No. 33 Engine Company						8,788 50
No. 6 H. and L. Co.	1888	Hanover and Ostend streets	133 x 25	12,000 00	2,000 00		14,750 00	9,433 00
No. 7 H. and L. Co.	1901	See No. 31 Engine Company						5.873 00
No. 8 H. and L. Co.	1907	See No. 30 Engine Company						6,058 00
No. 9 H. and L. Co.	1897	See No. 21 Engine Company						5,377 50
No. 10 H. and L. Co.	1895	Lafayette avenue, near Stricker street	145 x50-1	14,000 00	5,000 00		18,756 00	8,729 00
No. 11 H. and L. Co.	1898	North avenue and McMechen street	130x111x172	26,500 00	8,000 00		38,450 00	9,796 00
No. 12 H. and L. Co.	1905	Liberty road and Garrison avenue	100 x 52	21,330 66	1,579 00		22,060 00	6,330 00
No. 13 H. and L. Co.	1906	Carey street, near Hollins	80 x 41	24,156 69	5,234 99		25,140 00	9,279 00
No. 14 H. and L. Co.	1909	Gorsuch avenue, near Harford road	90 x 55	26,746 40	3,395 12		11,925 00	6,244 00
No. 15 H. and L. Co.	1907	Montford avenue and Mura street	100 x 30	20,859 74	3,003 63		21,200 00	5,796 00
No. 16 H. and L. Co.	1908	Calvert and Read streets	40 x165	38,534 12	8,081 45		31,000 00	9,199 00
No. 17 H. and L. Co.	1901	See No. 22 Engine Company						4,854 00
No. 18 H. and L. Co.	1912	See No. 20 Engine Company						5,435 00
No. 1 Hose Co.	1912	See No. 2 Water Tower Company						12,945 00
No. 2 Hose Co.	1912	See No. 2 Truck Company						12,745 00
No. 1 Water Tower	1891	See No. 15 Engine Company						9,347 25
No. 2 Water Tower	1908	South Gay street, near Baltimore	33-7 x 97-2½	24,113 81	10,647 60			10,752 00
Repair Shop	1912	Market Place and Baltimore street						15,206 00
Storeroom		See No. 15 Engine Company						3,000 00
Telegraph Department	1859	City Hall						348,391 31
Vacant property	1859	Harrison street, near Fayette	106 x 25	10,000 00	2,000 00	100 00	500 00	
Vacant property	1880	Biddle street, near Druid Hill avenue	150 x 30	10,000 00	9,500 00		6,800 00	
Vacant property	1888	Mary street, near Retreat	20 x 75	3,000 00	1,800 00	72 00	400 00	
Vacant property	1888	Belair road, near B. & O. crossing	110 x 40	5,000 00	1,900 00	40 00	1,800 00	
Vacant property	1900	Brunswick street, near Frederick avenue	85 x 41	3,000 00	4,125 00	61 50*	2,000 00	
Vacant property	1911	Light and Montgomery streets	32 x100		7,706 65		b7,706 65	
Vacant property	1911	Fulton avenue and Baker street	37½x142-3		7,197 50		b7,197 50	
				$1,154,541 78	$324,569 61	$1,028 75	$1,075,820 15	$2,261,294 38
		Valuation of equipment					2,261,294 38	
		Total val't'n of lots, bldgs. and equipment					$3,337,114 53	

* Owned by Commissioners of Finance and deducted in Lindsay and Bernard valuation and listed as assets of sinking fund in Schedule B XVIII.

(a) Represents total cost of pipe line system to December 31, 1913.

(b) Actual cost.

(c) Fireboat "Cataract."

(d) Fireboat "Deluge."

(e) Includes No. 2 Water Tower.

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Mount Royal Terraces (3)	1884	2.0		44,677 58	77,500 00
Carroll Park	1890	176.74		307,229 42	618,590 00
Bolton Park (Mt. Royal Station)	1891	3.52		103,433 00	160,000 00
Frick Triangle	1892	.05		Donated.	Not valued†
Brewer Square	1892	.39		Donated.	Not valued†
Bo-Lin Square	1893	.23		Donated.	Not valued†
Maple Place	1893	.07		Donated.	Not valued†
Clifton Park	1895	267.26		754,125 81	666,000 00
Linden Avenue Triangle	1895	.01		Donated.	Not valued†
Green Spring Avenue	1896	25.5		Donated.	Not valued†
Callow Triangle	1898	.03		Donated.	Not valued†
Gwynn's Falls Park	1902	390.3		329,809 80	317,092 95c
Latrobe Park	1902	13,80		40,590 00	48,300 00
Swann Park	1902	11.31		39,474 52	45,240 00
Wyman Park	1903	198.39		122,604 12	238,068 00
Fifth Regiment Armory Lot	1904	.25		Donated.	Not valued†
City College Lot	1904	.14		Donated.	Not valued†
Riggs Triangle	1905	.02		456 00	Not valued†
Venable Park	1907	60.81		67,726 00	48,648 00
Ashburton Park and Reservoir	1907	92.65		36,052 40	36,855 00b
Herring Run Park	1908	164.61		112,059 46	92,400 00
Charles Street Boulevard	1908	2.28		23,823 51	Not valued†
Philadelphia Road Triangle	1910	1.0		26,737 52	13,200 00
Easterwood Park	1911	7.52		23,500 00	23,500 00a
Mondawmin Squares (4)	1911	.26		Donated.	†
Totals		2,301.64	$6,820.12	$3,543,004 18	$6,697,867 95

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*Owned by Commissioners of Finance and deducted in Lindsay and Bernard Valuation and listed as Asset of sinking fund in Schedule B—XVIII.

†Treated as part of street.

‡Lindsay and Bernard figured on continuing the lakes as part of the water system, and deducted acreage of lakes, leaving 560 acres available at $6,000.00 per acre.

¶After deducting the ground rent at 4 per cent. the leasehold would have no value.

(a) Acquired after Lindsay and Bernard valuation and cost price shown as value.

(b) Reservoir acreage of 40 acres deducted.

(c) $14,503.05, amount paid for land in 1912, added to Lindsay and Bernard's 1911 valuation.

SCHEDULE B—XVI.

Police Station Houses.

STATION HOUSES.	Ground Rent.	Lot.	Building.	Lindsay and Bernard Valuation, 1911.
EASTERN:				
Bank and Bethel streets, 68 by 100 feet			$15,302 66	$12,720 00
CENTRAL:				
Saratoga, near Charles street, 66 by 193 feet	$600 00	$16,000 00	20,000 00	22 900 00
NORTHEASTERN:				
Ashland avenue and Durham street, 57½ by 37 feet		3,675 00	32,999 00	17,110 00
WESTERN:				
Pine street and Pin alley, 59.8 by 140 feet		7,000 00	42,909 70	37,987 00
NORTHERN:				
Cedar avenue and Second avenue, 155 by 300 feet		9,307 00	88,346 09	102,750 00
SOUTHWESTERN:				
Calhoun street, Pratt street, Marion alley, 55 by 157.2 feet		4,000 00	41,005 36	43,300 00
SOUTHERN:				
Ostend street and Patapsco street, 70 by 110 feet		5,800 00	39,364 00	42,800 00
NORTHWESTERN:				
Pennsylvania avenue and Lambert street, 46.6 by 150 feet		10,000 00	38,493 41	39,650 00
Total	$600 00	$55,782 00	$318,420 22	$319,217 00
Cost of lots			55,782 00	
Total cost of buildings and lots			$374,202 22	

SCHEDULE B—XVII.

Municipal Markets.

	Ground Rent.	Lot.	Structure.	Total.	Lindsay and Bernard Valuation, 1911.
BELAIR	....	$35,088 33	$19,260 45	$54,348 78	$30,750 00
Forest street, from Hillen street to 100 feet south of Low street.					
50 by 125 feet, Hillen street to Ensor street.					
56 by 150 feet, Hillen street to Ensor street.					
50 by 190 feet, Ensor street to Gay street.					
56 by 125 feet, Ensor street, to Gay street.					
50 by 265 feet, Gay street to Low street.					
50 by 100 feet, south of Low street.					
CANTON	....	**Donated**	8,613 15	8,613 15	**17,000 00**
O'Donnell street, from Patuxent street to Potomac street, 75 by 340 feet.					
CENTRE (New)	....	161,223 83	500,648 70	661,872 53	600,000 00
Market Space:					
133½ by 156⅓ by 170½ by 162¾ feet, Baltimore street to Swan street.					
153¾ by 182¼ by 214¾ by 140¼ feet, Swan street to Water street.					
283¾ by 240½ by 283¼ by 206 feet, Water street to Lombard street.					
CROSS STREET	*$974 00	8.116 67	52,022 68	60,139 35	**21,100 00**
515 feet, Charles street to Light street.					
63 feet, Cross street to Weyler street.					

FELLS POINT Broadway, Canton avenue to Thames street. 50 by 265 feet, Canton avenue to Aliceanna street. 50 by 300 feet, Aliceanna street to Lancaster street. 50 by 184 feet, Lancaster street to Thames street.		Donated	$62,871 96	$62,871 96	$67,450 00
HANOVER. Hanover street, Dover street, Camden street and Camden lane. 140 by 140 feet.		8,016 27	25,001 43	33,017 70	19,600 00
HOLLINS Hollins street, Carrollton to Arlington avenues. 40 by 340 feet.		Donated	29,871 16	29,871 16	26,500 00
LAFAYETTE Sewell street, Pennsylvania avenue to Fremont ave. 50 by 358 feet and 370 feet		28,993 24	31,137 15	60,130 39	18,000 00
LEXINGTON Lexington street and Louisiana avenue. 50 by 192 feet, Eutaw street to Paca street. 50 by 290 feet, Paca to Greene street. 50 by 200 feet. Greene street to Pearl street.	*$228 00	21,800 00	56,387 13	78,187 13	140,030 00
NORTHEAST Monument street, McElderry street, Chester street and Duncan street. 123¼ by 136 feet by 123¼ by 336 feet.	*1,200 00	....	19,472 93	19,472 93	160 00

RICHMOND		71,778 73	116,402 94	188,181 67	108,000 00
Biddle street, 103 feet.					
Richmond street, 120 feet.					
Howard street, 290 feet.					
Armory avenue, 161 feet.					
Linden avenue, 300 feet.					
Total ground rents	*$2,402 00				
Cost of lots		$335,017 07			
Cost of buildings			$921,689 68		
Total cost of lots and buildings				$1,256,706 75	
Total valuation 1911					$1,048,590 00†

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*Owned by Commissioners of Finance and deducted in Lindsay and Bernard valuation and listed as asset of sinking fund in Schedule B—XVIII.

†Total depreciation on structures marked off from cost of construction, $333,472.23.

SCHEDULE B—XVIII.

Ground Rentals on City Property Held by Commissioners of Finance for Redemption of Loans.

The following ground rents are held by the Commissioners of Finance for the redemption of loans, and while practically these rents are extinguished, yet as the cost price of each was furnished out of the Sinking Fund, they become assets of the Sinking Fund to the extent at least of their redemption value, if not their full market value, so that Messrs. Lindsay and Bernard, in their revaluation of 1911, charged off the ground rents at market, or redemption, values, and tabulated them separately, including them among the city's assets.

LOCATION.	Annual Rent.	Lindsay & Bernard's Valuation 1911.
City Hall, Holliday and Fayette sts.	$56 00	$1,400 00
Property yard, Rogers ave. and Low st.	540 00	9,000 00
Boys' Latin School, Park ave., nr. Preston st.	549 00	9,150 00
Old City Hall, Holliday st.	306 00	9,250 00
Baltimore City College, Howard st., opp. Centre.	1,000 00	25,000 00
Colored High School, Penna. ave. and Dolphin st.	1,147 50	19,125 00
School No. 2, Gough and Stiles sts.	50 00	1,250 00
School No. 4, Hanover and Lee sts.	210 00	3,500 00
School No. 6, Ann and Aliceanna sts.	22 50	462 00
School No. 8, Caroline st., near Baltimore.	107 33	1,788 88
School No. 11, Gilmor and Mosher sts.	757 00	12,616 00
School No. 13, McElderry st., nr. Pat. Pk. ave.	530 00	8,833 33
School No. 14, Linden ave. and Wilson sts.	840 00	14,000 00
School No. 19, Hollins and Monroe sts.	375 00	9,375 00
School No. 20, Eden and Preston sts.	80 00	2,000 00
School No. 21, Penna. ave. and Robert sts.	320 00	2,150 00
School No. 29, Sharp and West sts.	570 00	9,500 00
School No. 30, Hollins and Monroe st.	375 00	6,250 00
School No. 34, Carey st., nr. Columbia ave.	385 00	6,417 00
School No. 42, Broadway and Bank st.	200 00	3,333 00
School No. 47, Eastern ave. and Streeper st.	1,001 00	16,683 00
School No. 58, Woodberry lane	22 50	662 00
School No. 60, Francis st., nr. Fulton ave.	450 00	7,500 00
School No. 61, Linden ave. and Konig st.	1,155 00	19,250 00
School No. 67, Old Fred'k rd. and Fairview av.	360 00	6,000 00
School No. 68, Millington and Lehman aves.	240 00	4,000 00
School No. 76, Hull and Clement sts.	350 00	5,833 00
School No. 77, Castle st.	209 25	3,487 00
School No. 78, Harlem ave. and Monroe st.	480 00	9,500 00
School No. 91, Argyle ave., near Lanvale st.	120 00	3,000 00
School No. 92, Charles and Ostend sts.	372 50	6,208 00
School No. 93, Baltimore st., nr. Aisquith.	300 00	7,500 00
School No. 94, Ann and Chase sts.	501 75	12,543 00
School No. 96, Ramsay and Pulaski sts.	480 00	8,000 00
School No. 110, Waesche st., nr. Fremont.	480 00	12,000 00
School No. 111, Bond st. and Ashland ave.	130 00	3,250 00
School No. 112, Chappell st., nr. Carey.	630 00	10,500 00
School Chester street and Ashland avenue.	829 75	13,829 00
School Pennsylvania avenue and Biddle street	1,500 00	25,000 00
Engine House No. 3, Lombard st., nr. High.	150 00	3,250 00
Engine House No. 31, York rd., Waverly.	75 00	1,875 00
127 Battery ave.	157 50	3,937 00

SCHEDULE B—XVIII.—*Continued.*

Location.	Annual Rent.	Lindsay & Bernard's Valuation, 1911.
Brunswick avenue (vacant)	$61 50	$1,025 00
Riverside Park	3,770 62	94,265 00
Perkins' Spring Square	2,052 00	34,200 00
Collington Square	960 00	24,000 00
Cross Street Market	974 00	24,350 00
Lexington Market	228 00	5,700 00
Northeast Market	1,200 00	20,000 00
(a) 5 to 47 Weyler street	772 13	13,000 00
(b) Fayette and Arch streets	48 00	1,200 00
Old Fish House property	1,457 00	....
Boys' Home, Pleasant and Calvert streets	50 00	....
Old City Yard, foot of Clement street	497 25	....
Old City Yard	1,800 00	....
Totals	$32,285 08	$555,947 21

(a) Acquired 1883. Cost, $8,166.67.
(b) Acquired 1828. Cost, 800.00.

NEW SEWERAGE SYSTEM B—XIX.

The expenditures for account of the new sewerage system now in course of construction to December 31, 1913, were as follows:

Salaries, Engineering Department	$1,158,669 59
Salaries, Administrative Department	187,101 06
Salaries, Pumping Station, Disposal Plant and Laboratory	56,735 54
Rentals	50,458 86
Supplies	181,513 59
Disposal Plant—real estate	205,000 00
Pumping Station—real estate	121,022 83
Rights-of-way for sanitary and storm water drains	49,218 70
Construction	13,159,407 83
Total	$15,169,128 00

SCHEDULE B—XX.

Free Public Baths and Public Comfort Stations.

No.	Location.	Size of Lot.	Cost. Lot.	Cost. Bldgs. and Apparatus.
1	South High street, near Pratt street..	45 ft. 6 in.x106 ft. 3 in.	*	*
2	Columbia avenue and Calender street...	40 ft.x100 ft. 8½ in.	*	*
3	Argyle avenue, near Greenwillow street	40 ft.x140 ft.	*	*
4	West and Marshall streets	42 ft. x95 ft.	*	*
5	Baths and Comfort Station, Greenmount and Harford avenues......	90 ft.x55 ft.	$6,020 23	$38,415 06
6	Public Comfort Station No. 1, Centre Market Place......	42 ft.x24½ ft.	Bed of street.	15,122 52
7	West Park Recreation Centre.......			†3,000 00
8	Five Portable Baths in various localities			3,750 00
9	Winans' Beach Baths			1,500 00
10	Gwynn's Falls Baths.			11,200 00
11	Locust Point Baths..			500 00
12	Patterson Park.....			20,000 00

Invested in buildings and apparatus........	$93,487 58
Invested in lots..	6,020 23
Total invested..	$99,507 81

*Donated by Mr. Henry Walters.
†Bathing apparatus and plant.

NOTE—These figures do not represent the true value of the Free Public Bath properties. It will be observed that the ground and buildings of Baths Nos. 1, 2, 3 and 4 were donated by Mr. Henry Walters. The city is, therefore, treated as trustee of such properties and the values of the same are not included among the city's assets.

SCHEDULE B—XXI.

Uncollected Water Rents as of December 31, 1913.

Current water rents..	$156,061 04
Delinquent water rents....................................	9,542 54
Meter rates	4,423 39
Plumbing bills	19,290 44
Total..	$189,317 41

SCHEDULE B—XXII.

The Enoch Pratt Free Library.

General Statement.

The Enoch Pratt Free Library was founded by a citizen of Baltimore, whose name it bears. On January 21, 1882, he made the city the munificent offer of a Central Library Building and the sum of $833,333.33, "provided the city will grant and create an annuity of $50,000 per annum forever, payable quarterly to the Board of Trustees, for the support and maintenance of the Library and its branches." This offer on the part of Mr. Pratt received the thanks of the Mayor and City Council and, as a result of the action of these authorities, an Act was passed by the General Assembly of Maryland at its January Session of 1882 (Chapter 181) enabling the city to accept the donation from Mr. Pratt and providing for the appointment and incorporation of trustees for the management of the Library.

This acceptance was made by the legal voters of the City of Baltimore at an election held October 25, 1882, when they approved an ordinance of the Mayor and City Council accepting the gift.

The powers given the institution by the original charter were enlarged by Chapter 221 of the Acts of 1900, so that gifts, bequests, devises and conveyances of property could be received from any source by the trustees and held in a similar manner to the original gift.

The Central Building was completed in the autumn of 1884, and shortly thereafter the Hon. Lewis H. Steiner, M. D., was elected librarian, and the Library was formally opened to the public on January 4, 1886.

The total number of books now owned by the Library is 307,540. The circulation of books for home use from the Central Library and the sixteen branches and stations amounted to 621,924 in 1913, and 92,098 magazines were used in the Central Library reading-room.

The expenditures for 1913 were:

Books	$15,955 01
Periodicals	2,313 91
Binding	3,759 07
Construction and repairs	5,348 39
Stationery and supplies	2,461 80
Insurance	685 00
Furniture and typewriters	1,084 24
Drayage	799 80
Rent	615 02
Coal	2,801 00
Light	2,833 52
Printing	633 89
Miscellaneous	3,231 76
Salaries	51,422 71
Total	$93,945 12

At the time the Library was opened, probably no city in the United States, except Boston, was more adequately served by a public library than Baltimore. As the years passed on, however, both population and area of the city were doubled, while no additional income was received by the Library, which was thus unable either to enter new fields of library work or properly to cover the ground which it endeavored to occupy. After careful thought, Mr. Andrew Carnegie was asked to consider our needs, and generously responded by a gift in November, 1906, of a half a million dollars to be used for the construction of twenty branch library buildings, which should be maintained by the city, with an appropriation of not less than 10 per cent. of the cost of the buildings, and should be erected upon lots provided either by the municipality or by the gift of individuals or corporations. The funds provided by Mr. Carnegie may be used for the purchase of furniture for the buildings, but are not available for the purchase of books. It was thought necessary that an amendment of the City Charter should be made in order to make certain the right of the city to accept this gift, and to make an appropriation for library purposes. This legislation was secured at the session of the General Assembly in 1908 (Laws of 1908, Chapter 144), and in the same year an appropriation was first made by the city and ground was broken for the first of the branch libraries erected from Mr. Carnegie's gift. Seven of the branch libraries provided for by the Carnegie Fund have already been erected. An additional Central Library is greatly needed, as are lots on which new branch libraries may be placed.

Directory of the Enoch Pratt Free Library and Branches.

Number.	Location.	Dimensions of Lot.	Opened.	Number of Volumes.
Central Library,	106 W. Mulberry street	80.7 by 140 feet	1886	186,913
Annex,	404 Cathedral street	23½ by 108 feet	....	....
Branch No. 1,	Fremont avenue and Pitcher street	87 by 75 by 40 by 87 feet	1886	13,707
Branch No. 2,	Calhoun and Hollins streets	40 by 90⅓ feet	1886	13,003
Branch No. 3,	Light and Gittings streets	48 by 83.3½ feet	1886	11,033
Branch No. 4,	Ellwood and O'Donnell streets	60 by 125 feet	1886	10,939
Branch No. 5.	Broadway and Miller street	50 by 100 feet	1888	13,317
Branch No. 6,	St. Paul, near Twenty-fifth street	70 by 123 feet	1896	11,788
Branch No. 7,	Falls road, near Thirty-seventh street	50 by 135 feet	1900	7,718
Branch No. 8,	Clifton avenue and Eleventh street	160 by 96 feet	1907	5,115
Branch No. 9,	Towson and Beason streets	90 by 90 feet	1910	4,498
Branch No. 10,	Gay and Mott streets	Rented room	1902	1,734
Branch No. 11,	1119 E. Baltimore street	Rented room	1904	2,256
Branch No. 12,	Sterrett and St. Peter streets	61.1 by 58.10 by 76.3½ by 57 feet	1909	5,394
Branch No. 13,	Linwood avenue and Fayette street	86¼ by 100 by 99.3½ by 101¼ feet	1910	5,325
Branch No. 14,	Garrison and Calloway avenues	253.67 by 80.7 by 230.65 by 177.33 feet	1910	5,132
Branch No. 15,	Taylor street and Gorsuch avenue	90 by 90 feet	1911	4,541
Branch No. 16,	Fifth avenue, near Park Heights avenue.	83.5½ by 185 by 175 by 75 feet	1912	4,644
Branch No. 17,	North avenue, near Smallwood street	75 by 90, and rear lot 100 by 73½ feet	1914	483

Note—The City is treated as trustee of the Enoch Pratt Free Library lots, buildings, and equipment, and therefore the values are not included among the City's assets.

FROM THE REPORT OF THE

BALTIMORE AUDIT COMPANY

BALTIMORE, March 20, 1914

The Honorable Mayor and City Council of Baltimore.

GENTLEMEN:

We have completed our audit for the year ended December 31, 1913, embracing a thorough examination of the vouchers, the books and accounts of each and every department, the verification of all additions and extensions, and the checking of all postings.

In the offices of the Collector of Taxes and the Collector of Water Rents and Licenses, these two departments being the main source of revenue of the city, we verified all extensions and additions, and saw that all money received was properly accounted for and turned over to the Comptroller.

In these departments a few errors were found in the extensions and postings. Statements were rendered, and corrections were made adjusting these errors.

In sundry other departments the additions were verified, postings checked, and we found that the expenditures were in agreement with the Comptroller's books. Furthermore, trial balances were drawn from the ledgers, and all were in balance under date of December 31, 1913.

In the Comptroller's office we verified all extensions and additions; examined all the pay vouchers, and followed all receiving and pay warrants to the Register's office, and verified the trial balance under date of December 31, 1913.

In the City Register's office all receiving and pay warrants were checked with the cash book, all additions verified in said book, and the balance on hand as of December 31, 1913, was proved by counting the cash on hand and reconciling the amounts as certified to by certificates from the depositories.

All stock issued, whether by sale or transfer, was verified by checking sales of stock to the cash book, and for all stock issued in lieu of transferred stock it was seen that the original stock certificates for the same amounts were duly cancelled. Each issue of new stock was checked to its proper ledger account.

In the Finance Commissioner's Department, all the extensions, additions and posting, together with the vouchers, were examined and verified, and the cash on hand was found to be in agreement with the balance as per certificates from the several banks. The Finance Commissioners had stock in the vaults of the Safe Deposit and Trust Company, under date of December 31, 1913, in trust for the various sinking and special funds, as shown by the following table:

City stock on hand January 1, 1913		$20,207,359 97
Purchase of city stock from time to time during 1913		1,575,100 00
		$21,782,459 97
Less Water 1922 Sinking Fund sold to Enoch Pratt Free Library Sinking Fund		601,000 00
		$21,181,459 97
Certificates of deposit (city stock as collateral)		4,263,000 00
		$25,444,459 97
Enoch Pratt Free Library Fund, January 1, 1913	$1,174,100 00	
Less Water 1922 5% sold Commissioners of Finance	500,000 00	
	$674,100 00	
Plus Water 1922 5% Sinking Fund purchased from Commissioners of Finance	601,000 00	
		1,275,100 00
Horwitz Benevolent Fund		20,000 00
Frederick Raine Fund		400 00
		$26,739,959 97

Valley Railway, State of Virginia (10,000 shares)	No value
Baltimore and Reisterstown Turnpike Stock (550 shares)	$412 50
Baltimore and York Turnpike Stock (625 shares)	No value

All of the above stock was examined by us in the presence of the Finance Commissioners on March 19, 1914.

We desire to thank the heads of each department, as well as all clerks, for the assistance and courteous treatment rendered us during our audit.

Respectfully submitted,

BALTIMORE AUDIT COMPANY,

(Signed) CHARLES L. HEHL, *President*,
Certified Public Accountant.

APPROVED:

(Signed) JOHN KUCHLER, *Vice-President*,
Certified Public Accountant.

(Signed) ERNEST E. WOODEN, *Sec. and Treas.*,
Certified Public Accountant.

The report includes a number of statements, exhibits and schedules of the city's finances for the year 1913.

COMPLIMENTS OF . . .

JACOB W. HOOK

CITY COLLECTOR

ANNUAL REPORT

OF THE

CITY COLLECTOR

TO THE

Mayor and City Council of Baltimore

FOR THE

FISCAL YEAR ENDING DECEMBER 31, 1913

1797

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER

1914

REPORT

CITY COLLECTOR'S OFFICE,

CITY HALL,

BALTIMORE, January 1, 1914.

To the Honorable Mayor and City Council of Baltimore.

GENTLEMEN—I beg to submit for your consideration the report of this Department for the year ending December 31, 1913, showing that the amount of money received from all sources during the year was $11,262,208.11.

Table "A" shows the monthly collections of both city and State, including the rural, suburban and annex, amounting to $11,262,208.11. Of this total the city's proportion was $9,705,351.77, and that of the State $1,556,856.34.

Table "B" shows the basis of the several levies on which collections have been made during the past year, with the amount collected on each levy; also the gross amount received for opening and for paving streets; also the amount received from mortgages.

Table "C" shows the rate of tax per $100 and various items of the several levies from 1908 to 1913, inclusive.

Table "D" is an exhibit of the monthly receipts on the several levies from 1900 to 1913; also receipts for opening streets and alleys and paving streets and alleys, for securities, savings banks and for mortgages.

Table "E" shows the respective percentages of current taxes collected on the several classes of property.

Table "F" shows the percentage collected upon during the current year of the respective levies, including securities and savings bank deposits from 1902 to 1913, inclusive.

Table "G" shows the percentage collected monthly on real and personal property (levy of 1913) to December 31, 1913.

Table "H" shows receipts for opening and closing streets and alleys during the year, amounting to $115,441.61.

Table "I" shows receipts for paving streets, alleys and footways during the year, amounting to $7,141.74.

Table "J" shows the total amounts collected, the total basis collected upon during the year 1913 in comparison with the same for the year 1912.

Table "K" shows the total collections made during the year 1913 in comparison with the estimate as made by the Board of Estimates, *showing the amount collected over estimate of* $418,698.88.

Table "L" shows receipts collected during the year for Special Paving Tax, less discount, and with interest and penalty added, amounting to $62,317.76, and sewer connections, with interest, amounting to $14,695.32.

RURAL, SUBURBAN AND ANNEX.

Table "A" shows the amounts of city and State taxes collected during the year upon the levies of 1906 to 1913, amounting to $531,317.25; also the basis upon which such collections were made. Of this total the city's proportion was $407,011.52, and that of the State $124,305.73.

Table "B" shows the basis of the several levies on which collections have been made during the year, including the amount of interest received from taxes in arrears and the amount of discount allowed for prompt payment.

I would especially call your attention to Tables "G" and "K."

Table "G" shows net percentage of collections of real and personal basis for year 1913 to be 84½ per cent.; my estimate to Board of Estimates was 82½ per cent., showing my collections to be 2 per cent. over estimate.

Table "K" shows an excess collection over estimate (from all sources, current and arrears) of $418,698.88, due in a measure to extra efforts put forth to bring up the collections. As the money conditions were not the best during the year 1913 it is particularly gratifying that in face of these conditions my collections should show such a handsome increase.

Under present laws, personal taxes are in arrear May 1, and real estate taxes July 1 of the current year. I understand a bill has been offered in the Legislature making both real and personal in arrear at the same time. This meets with my hearty approval and I sincerely wish it will become a law.

I wish to acknowledge the cordial co-operation of his Honor, the Mayor, and other officers of the city with whom I have been brought in contact in the discharge of my official duties.

Respectfully submitted,

Jacob W. Hook,
City Collector

TABLES

TABLE A.

Total City and State Taxes, Including the Rural, Suburban and Annex, Received from January 1, 1913, to December 31, 1913.

	City.	State.	Total.	Rural, Suburban and Annex.		
				City.	State.	Total.
January	$1,210,886 26	$206,503 57	$1,417,389 83	$49,471 01	$15,464 55	$64,935 56
February	2,919,156 58	507,292 93	3,426,449 51	91,182 52	28,671 32	119,853 84
March	478,627 36	64,761 93	543,389 29	23,902 00	7,526 38	31,428 38
April	603,622 55	81,865 52	685,488 07	23,594 65	7,278 73	30,873 38
May	750,681 64	109,294 16	859,975 80	27,742 82	7,598 45	35,341 27
June	610,470 97	72,033 59	682,504 56	44,721 94	12,807 68	57,529 62
July	1,558,442 30	186,353 49	1,744,795 79	81,008 66	24,213 81	105,222 47
August	209,614 82	100,651 62	310,266 44	16,285 40	6,052 03	22,337 43
September	281,600 31	30,154 49	311,754 80	12,939 21	3,895 82	16,835 03
October	169,581 69	20,988 15	190,569 84	10,463 02	3,211 21	13,674 23
November	173,544 65	18,882 37	192,427 02	11,854 38	3,311 29	15,165 67
December	332,111 12	33,768 79	365,879 91	13,845 91	4,274 46	18,120 37
Total	$9,298,340 25	$1,432,550 61	$10,730,890 86	$407,011 52	$124,305 73	$531,317 25

City, including streets, penalty, sewer connections and special paving tax	$9,298,340 25
Rural, suburban and annex	407,011 52
Total	$9,705,351 77

State, city proper	$1,432,550 61
State, rural, suburban and annex	124,305 73
Total	$1,556,856 34

City	$9,705,351 77
State	1,556,856 34
Total	$11,262,208 11

Note—In addition to the above there was collected on account of "White Way" lighting the sum of $1,427.70.

TABLE B.

Recapitulation of Taxes Collected from January 1, 1913, to December 31, 1913.

	Basis.	Rate.	Tax.	Discount.	Net Tax.	Interest.	Total.
1900—Personal	$220	$1 67	$3 67	....	$3 67	$3 12	$6 79
1901—Personal	2,535	1 81½	46 02	....	46 02	33 12	79 14
1902—Personal	2,755	1 95	53 75	....	53 75	35 54	89 29
1903—Personal	3,255	1 86¾	60 78	....	60 78	36 32	97 10
1904—Personal	8,335	2 06	171 71	....	171 71	93 92	265 63
1905—Real	35,592	2 11½	752 78	....	752 78	361 65	1,114 43
Personal	10,435	2 11½	220 72	....	220 72	101 20	321 92
1906—Real	52,493	2 00	1,049 86	....	1,049 86	454 36	1,504 22
Personal	19,201	2 00	384 02	....	384 02	145 25	529 27
1907—Real	14,460	1 97½	285 48	....	285 48	98 24	383 72
Personal	23,432	1 97½	462 77	....	462 77	150 76	613 53
Securities	65,028	30	195 08	....	195 08	71 20	266 28
1908—Real	14,860	2 00	297 20	....	297 20	88 80	386 00
Personal	53,647	2 00	1,072 94	....	1,072 94	281 42	1,354 36
Securities	70,828	30	212 48	....	212 48	64 81	277 29
1909—Real	8,059	1 95	157 15	....	157 15	34 72	191 87
Personal	380,366	1 95	7,417 15	....	7,417 15	1,551 19	8,968 34
Securities	947,378	30	2,842 14	....	2,842 14	682 05	3,524 19
1910—Real	1,181,811	1 99	23,518 02	....	23,518 02	4,162 92	27,680 94
Personal	1,027,934	1 99	20,455 89	....	20,455 89	3,560 57	24,016 46
Securities	2,400,912	30	7,202 73	....	7,202 73	1,289 12	8,491 85
1911—Real	14,787,779	1 98	292,794 04	....	292,794 04	34,384 06	327,178 10
Personal	2,223,942	1 98	44,034 06	....	44,034 06	5,517 03	49,551 09
Securities	3,198,438	30	9,595 31	....	9,595 31	1,156 72	10,752 03

1912—Real	26,810,247	1 89	506,713 68	....	506,713 68	25,453 16	532,166 84
Personal	8,307,676	1 89	157,015 09	....	157,015 09	3,451 07	160,466 16
Securities	4,361,825	30	13,085 48	....	13,085 48	781 36	13,866 84
Savings Banks	35,508	18¾	66 58	....	66 58	33	66 91
1913—Real	286,042,813	2 01	5,749,463 89	$30,556 55	5,718,907 34	7,573 19	5,726,480 53
Personal	72,772,598	2 01	1,462,719 30	7,683 02	1,455,036 28	692 29	1,455,728 57
Securities	173,324,285	30	519,972 85	4,700 46	515,272 39	82 48	515,354 87
Savings Banks	93,194,148	18¾	174,739 03	1,619 48	173,119 55	....	173,119 55
Total	$691,382,795	....	$8,997,061 65	$44,559 51	$8,952,502 14	$92,391 97	$9,044,894 11

Penalty	53,849 71
Opening streets and alleys	115,441 61
Paving streets and alleys	7,141 74
Sewer connections	14,695 32
Special paving tax	62,317 76
Total	$9,298,340 25

NOTE—The discount allowed by the Mayor and City Council for the prompt payment of taxes on the levy of 1913 on real and personal, according to the above table, was $38,239.57, which is equivalent to the taxes on a basis of $1,902,466, and this amount deducted from the gross basis of $358,815,411 leaves a net basis collected upon of $356,912,945. (See Table G.)

TABLE C.

Rate Per One Hundred Dollars.

	1908.	1909.	1910.	1911.	1912.	1913.
Police Department	34 11/16	35 1/16	34 5/8	33 29/32	32 10/32	32 5/8
Courts	6 5/16	6 7/16	6 3/32	6 13/32	6	7 5/8
Public Schools	35 3/16	34 9/16	42 1/4	34 1/2	35 13/32	41 1/8
Charities and Corrections	18 11/16	22 4/16	21 5/8	19 29/32	18 12/32	18 1/8
Interest on Stock Debt	45 10/16	37 13/16	31 7/32	45 25/32	46 13/32	51
General	35 5/16	37 1/2	41 5/8	34 28/32	23 4/32	22 5/8
Water 1926 Sinking Fund	1	1	1	1	1	1
Internal Improvements 1928 Sinking Fund	3	3	3	3	3	3
General Sinking Fund	1¾	1¾	1¾	1¾	1¾	1¾
Public Improvement 1940 Sinking Fund	2	2	2	2	2	2
Four Million Loan 1945 Sinking Fund	½	½	½	½	½	½
Water 1916 Sinking Fund	2	2	2	2	2	2
Water 1922 Sinking Fund	½	½	½	½	½	½
Funding 1936 Sinking Fund	1	1	1	1	1	1
Conduit 1922 Sinking Fund	1	1	1	1	1	1
Refunding 1940 Sinking Fund	2	2	2	2	2	2
Conduit 1928 Sinking Fund	1	1	1	1	1	1
Burnt District Improvement 1954 Sinking Fund	2	2	2	2	2	2
Sinking Funds—Annex 1951 and 1954; Burnt District Improvement 1960; Conduit 1958 and 1962; Dock Improvement 1961; Engine House 1957; Jones Falls Improvement 1961; Paving 1951; Sewerage 1961 and 1980; School House 1957 and 1961; Water 1958	6 7/16	3 5/8	3 26/32	4 27/32	9 20/32	9 6/8
	$2.00	$1.95	$1.99	$1.98	$1.89	$2.01

TABLE D

Monthly Receipts of Taxes from January 1, 1913, to December 31, 1913, on the Several Levies from 1900 to 1913, inclusive, for Opening and Paving Streets and Alleys, Securities, Savings Banks, Penalties, Sewer Connections and Special Paving Tax

MONTHS	1900	1901	1902.	1903.	1904.	1905.	1906.	1907.	1908	1909.	1910.	1911.	1912.	1913.	Savings Banks.	Opening Streets and Alleys.	Paving Streets and Alleys.	Securities	Penalties.	Sewer Connections.	Special Paving Tax.	Total.
January		$23 13	$23 99	$35 41	$37 57	$37 05	$41 30	$43 13	$263 42	$5,212 82	$8,701 30	$26,402 17	$108,642 93	$917,922 58	$79,369 75	$435 00	$371 36	$59,460 75	$3,705 48	$155 26	$1 86	$1,210,886 26
February		7 74	8 03	13 31	20 74	79 02	195 11	308 31	247 29	1,455 53	4,288 37	24,411 11	60,652 52	2,341,781 00	81,026 43	6,901 45	667 13	392,474 92	3,468 11	1,150 46		2,919,156 58
March		4 65	4 83			13 99	18 33	57 31	22 19	722 78	2,047 93	23,683 03	74,709 86	309,948 83		44,758 50	275 69	18,338 81	3,456 64	563 99		478,627 36
April		14 47	15 01	13 84	46 33	45 71	232 57	44 55	104 90	228 18	7,498 75	30,326 31	75,613 47	453,493 81		13,276 87	410 26	17,426 37	3,970 60	860 55		603,622 55
May					9 52	9 40	36 92	216 12	33 80	100 52	3,183 29	59,675 02	104,781 14	499,831 25	1,744 48	16,687 73	1,272 94	54,901 95	4,962 52	1,479 46	1,755 58	750,681 64
June					5 10		12 11	24 94	42 67	119 57	1,720 03	25,310 62	59,973 57	503,903 97	89 06	3,107 00	1,629 77	2,577 10	3,754 06	665 39	7,536 01	610,470 97
July					6 38	1,103 45	20 56	115 48	242 22	532 81	1,729 23	40,108 93	77,512 95	1,388,435 79	514 70	3,349 75	646 05	1,797 80	3,484 27	1,867 39	36,974 54	1,558,442 30
August			7 19	6 64	19 85	19 60	17 79	16 83	151 23	264 91	690 32	26,660 92	28,529 57	139,763 87		847 50	260 69	653 15	4,820 92	621 06	6,262 78	209,614 82
September		7 90	8 20	7 56	40 17	39 66	21 60	31 34	80 52	74 94	4,717 90	17,056 49	24,839 84	196,197 50	10,428 39	17,745 64	289 90	1,235 95	4,678 70	1,511 23	2,586 88	281,600 31
October	$6 79	16 49	17 09	15 78	75 12	66 74	1,355 85	95 75	266 53	271 34	6,483 47	36,947 81	23,043 81	88,060 48		2,458 00	741 32	443 18	5,148 44	1,866 87	2,200 83	169,581 69
November		4 76	4 95	4 56	4 85	2 87	2 67	8 02	212 50	92 60	6,722 25	35,484 61	18,135 33	100,749 27		3,392 67	288 81	821 34	4,784 93	823 75	2,003 91	173,544 65
December						18 86	78 68	35 47	73 09	84 21	3,914 56	30,662 17	36,198 01	242,120 75	13 65	2,481 50	287 82	2,402 03	7,615 04	3,129 91	2,995 37	332,111 12
Total	$6 79	$79 14	$89 29	$97 10	$265 63	$1,436 35	$2,033 49	$997 25	$1,740 36	$9,160 21	$51,697 40	$376,729 19	$692,633 00	$7,182,209 10	$173,186 46	$115,441 61	$7,141 74	$552,533 35	$53,849 71	$14,695 32	$62,317 76	$9,298,340 25

	1913.
Police De	32 6/8
Courts . . .	7 6/8
Public Scl	41⅛
Charities	18⅛
Interest o	51
General . .	22 6/8
Water 192	1
Internal I	3
General S	1¾
Public Im	2
Four Milli	½
Water 191	2
Water 192	½
Funding 1	1
Conduit 1	1
Refunding	2
Conduit 1	1
Burnt Dis	2
Sinking F	
trict Im	
Dock I	
Jones I	
Seweraį	
1961; W	9 6/8
	$2.01

TABLE E.

Showing the Respective Percentages of Current Taxes Collected on the Several Classes of Property.

	Basis.	Basis Collected Upon.	Per Cent Gross.	Per Cent Net.
Real, full rate, $2.01 per hundred	$337,284,704	$286,042,813	84.78	84.32
Real suburban, $1.30 per hundred	19,020,136	14,114,717	74.21	73.87
Real rural, 67c. per hundred	28,106,338	21,349,969	75.96	75.59
Tangible personal, individuals, firms and foreign corporations, full rate	42,598,422	32,549,107	76.40	75.93
Shares of national banks and Maryland corporations, net assessment, full rate	44,473,410	40,223,491	90.45	90.03
Securities, 30c. per hundred	180,074,212	173,324,285	96.25	95.38
Savings banks' deposits, 18¾c. per hundred	93,255,372	93,194,148	99.93	99.01

TABLE F.

Showing the Percentage Collected Upon During the Current Year of the Respective Levies, Including Securities and Savings Banks' Deposits, from 1902 to 1913, Inclusive.

YEAR.	Basis.	Basis Collected.	Per Cent.
1902	$413,379,062	$357,942,351	86.58
1903	408,049,102	352,837,058	86.47
1904	467,618,015	412,039,243	88.11
1905	491,521,174	425,837,622	84.60
1906	551,695,818	469,513,865	85.10
1907	611,320,038	512,804,094	83.87
1908	631,675,082	517,711,073	81.96
1909	614,076,898	545,142,870	88.77
1910	654,940,025	570,693,925	87.14
1911	659,073,817	594,062,020	90.13
1912	681,009,352	612,393,951	89.92
1913	697,686,120	625.333,844	89.63

TABLE G.

Showing the Percentage Collected Monthly on Real and Personal Property, Levy of 1913, to December 31, 1913.

Real and Personal Basis, December 31, 1913.	Months.	Basis Collected Upon.	Per Cent.	
$424,356,536	January	$46,129,081	10.87	
	February	117,683,314	27.73	
	March	15,536,840	3.66	
	April	22,675,242	5.35	
	May	24,901,206	5.87	
	June..........	25 067,021	5.91	
	July	69,065,687	16.27	
	August	6,935,444	1.63	
	September....	9,713,877	2.29	
	October	4,318,404	1.02	
	November	4,935,541	1.16	
	December	11,853,754	2.79	
		$358,815,411	84.55	Gross.
Discounts...............................		1,902,466	.44	
Net basis collected upon.........		$356,912,945	84.11	Net.
Real and Personal basis estimated upon by Board of Estimates................		$422,366,449		
Real and Personal basis collected upon.		358,815,411	84.95	Gross.
		356,912,945	84.50	Net.

Property Subject to Full Rate.	Basis.	Basis Collected Upon.	Per Cent.	
			Gross.	Net.
Real	$337,284,704	$286,042,813	84.78	84.32
Tangible Personal (Individuals, Firms and Foreign Corporations)....	42,598,422	32,549,107	76.40	75.93
Shares of National Banks and Maryland Incorporated Companies (Net Assessments)..........	44,473,410	40,223,491	90.45	90.03
Total	$424,356,536	$358,815,411		

TABLE H.

Summary of Receipts for Opening and Closing Streets and Alleys from January 1, 1913, to December 31, 1913.

Baker Street	$19,502 25
Bartlett Avenue	4,483 00
Curley Street	294 00
Dukeland Avenue	61 00
Eleventh Street	4,979 35
Fortieth Street	2,075 33
Frederick Road	2 00
Garrison Avenue	3,354 30
Glover Street	1,999 88
Harford Road	3,973 80
Homestead Street	100 00
Hood Street	398 00
Little Green Street	1,881 50
McPhail Street	1,585 00
Montebello Avenue	2,325 50
Nursery Lane	1 00
Oak Street	2,931 60
Palatka Avenue	496 17
Riverside Avenue	1,716 75
Thames Street	269 33
Thirtieth Street "30th"	6,016 57
Thirty-first Street "31st"	2,580 23
Thirty-third Street "33rd"	54,070 80
Woodberry Avenue	344 25
Total	$115,441 61

TABLE I.

Summary of Receipts for Paving Streets, Alleys and Footways from January 1, 1913, to December 31, 1913.

Alleys	$3,504 73
Carroll Street	273 18
Footways	3,044 99
Lombard Street	278 49
Massachusetts Avenue	40 35
Total	$7,141 74

TABLE J.

Shows the Total Amount Collected, the Total Basis Collected Upon, During the Year 1913, on Taxes in Arrears and on Levy of 1913, in Comparison With Same for the Year 1912.

The total amounts collected in 1913 were:

On taxes in arrears	$66,048,951	$1,174,210 59
On levy of 1913 real and personal	358,815,411	7,182,209 10
On levy of 1913 securities	173,324,285	515,354 87
On levy of 1913 savings banks	93,194,148	173,119 55
Total	$691,382,795	$9,044,894 11

The total amounts collected in 1912 were:

On taxes in arrears	$53,574,386	$1,027,345 89
On levy of 1912 real and personal	343,590,862	6,452,489 91
On levy of 1912 securities	178,038,584	530,000 03
On levy of 1912 savings banks	90,764,505	168,193 07
Total	$665,968,337	$8,178,028 90

SUMMARY.

1913.	Taxes in arrears	$66,048,951	$1,174,210 59
1912.	Taxes in arrears	53,574,386	1,027,345 89
1913.	Levy of 1913 real and personal	358,815,411	7,182,209 10
1912.	Levy of 1912 real and personal	343,590,862	6,452,489 91
1913.	Levy of 1913 securities	173,324,285	515,354 87
1912.	Levy of 1912 securities	178,038,584	530,000 03
1913.	Levy of 1913 savings banks	93,194,148	173,119 55
1912.	Levy of 1912 savings banks	90,764,505	168,193 07

TABLE K.

Showing the Total Collections Made During the Year 1913 in Comparison With Estimates as Made by the Board of Estimates.

	Collected.	Estimated.	Deficiency.	Excess.
Current— $2.01 rate....	$7,173,943 62	$7,003,891 63	....	$170,051 99
Suburban— $1.30 rate....	182,651 88	190,369 31	$7,717 43	....
Rural— 67c. rate.....	142,339 11	153,557 39	11,218 28	....
Securities— 30c. rate.....	515,272 39	521,513 13	6,240 74	....
Savings b'ks— 18¾c. rate...	173,119 55	172,725 00	....	394 55
Interest	98,812 84	75,000 00	....	23,812 84
Penalty........	53,849 71	45,000 00	....	8,849 71
Arrears, city, rural and suburban— All rates...	1,165,766 24	925,000 00	....	240,766 24
Total......	$9,505,755 34	$9,087,056 46	$25,176 45	$443,875 33

SUMMARY.

Collected	$9,505,755 34
Estimate	9,087,056 46
Amount collected over estimate........	$418,698 88
Excess..................................	$443,875 33
Deficiency	25,176 45
Amount collected over estimate........	$418,698 88

TABLE L.

Special Paving Tax.

CLASS.	Rate.	Frontage.	Tax.	Dis-count.	Interest.	Penalty.	Total.
A	15c.	393,080′ 4″	$58,962 57	$4 56	$188 85	$446 02	$59,592 88
B	10c.	23,647′ 5″	2,364 57	10	7 19	16 80	2,388 46
C	5c.	6,670′ 10″	333 57	01	72	2 14	336 42
Total			$61,660 71	$4 67	$196 76	$464 96	$62,317 76

Sewer Connections.

Full and partial payments	$14 212 43
Interest	482 89
Total	$14,695 32

TABLE A.

Rural, Suburban and Annex.

The collections during the year 1913 were $407,011.52, as follows:

Levy of 1906 annex	$9 20
Levy of 1907 annex	9 20
Levy of 1908 annex	9 20
Levy of 1909 rural	23 15
Levy of 1910 rural	1,451 85
Levy of 1910 suburban	619 09
Levy of 1911 rural	15,213 49
Levy of 1911 suburban	11,398 95
Levy of 1912 rural	23,038 82
Levy of 1912 suburban	29,635 39
Levy of 1913 rural	142,604 25
Levy of 1913 suburban	182,998 93
Total	$407,011 52

The basis collected upon were:

Levy of 1906 annex	$1,534
Levy of 1907 annex	1,534
Levy of 1908 annex	1,534
Levy of 1909 rural	3,210
Levy of 1910 rural	184,867
Levy of 1910 suburban	40,626
Levy of 1911 rural	2,064,924
Levy of 1911 suburban	781,999
Levy of 1912 rural	3,368,148
Levy of 1912 suburban	2,231,106
Levy of 1913 rural	21,349,969
Levy of 1913 suburban	14,114,717
Total	$44,144,168

The amount of State taxes collected were $124,305.73.

Levy of 1906 annex	$5 00
Levy of 1907 annex	3 27
Levy of 1908 annex	3 12
Levy of 1909 rural	6 14
Levy of 1910 rural	345 03
Levy of 1910 suburban	74 45
Levy of 1911 rural	4,963 87
Levy of 1911 suburban	1,887 54
Levy of 1912 rural	8,079 27
Levy of 1912 suburban	5,311 34
Levy of 1913 rural	62,114 91
Levy of 1913 suburban	41,511 79
Total	$124,305 73

Total City	$407,011 52
Total State	124,305 73
Total	$531,317 25

TABLE B.

RURAL, SUBURBAN AND ANNEX.

Recapitulation of Taxes Collected from January 1, 1913, to December 31, 1913.

YEARS.	Basis.	Rate.	Tax.	Discount.	Net Tax	Interest.	Total.
1906—Real Annex......	$1,534	$0 60	$9 20	....	$9 20	....	$9 20
1907—Real Annex......	1,534	60	9 20	....	9 20	....	9 20
1908—Real Annex......	1,534	60	9 20	....	9 20	....	9 20
1909—Real Rural.......	3,210	65	20 86	....	20 86	$2 29	23 15
1910—Real Rural.......	184,867	66⅓	1,226 28	....	1,226 28	225 57	1,451 85
1910—Real Suburban...	40,626	1 30	526 84	....	526 84	92 25	619 09
1911—Real Rural.......	2,064,924	66	13,628 51	....	13,628 51	1,584 98	15,213 49
1911—Real Suburban...	781,999	1 30	10,166 01	....	10,166 01	1,232 94	11,398 95
1912—Real Rural.......	3,368,148	65	21,892 91	....	21,892 91	1,145 91	23,038 82
1912—Real Suburban...	2,231,106	1 26	28,110 65	....	28,110 65	1,524 74	29,635 39
1913—Real Rural.......	21,349,969	67	143,042 02	$702 91	142,339 11	265 14	142,604 25
1913—Real Suburban...	14,114,717	1 30	183,491 31	839 43	182,651 88	347 05	182,998 93
Total.............	$44,144,168	....	$402,132 99	$1,542 34	$400,590 65	$6,420 87	$407,011 52

REPORT

OF THE

CITY LIBRARIAN

TO THE

Mayor and City Council of Baltimore

FOR THE

YEAR ENDING DECEMBER 31, 1913

1797

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER
1914

Report of the City Librarian

BALTIMORE, December 31, 1913.

To the Mayor and City Council of Baltimore.

GENTLEMEN:

The activities of the City Library during the past year have been of a varied character. The City Librarian, in his capacity as purchasing agent for certain classes of supplies, placed about 7,000 orders. The material was delivered to one point and distributed to various City departments, including not only those in the City Hall, but to the several annexes; Bay View, and, in some instances, the schools. This feature of the duties of the Librarian has kept the force very busy, as the detail work incident to properly inspecting and checking supplies, auditing bills and keeping accounts, is very extensive. The amount expended through the Office of the City Librarian for this purpose was $35,035.40. Of this, $24,250.28 were charged against the City Library appropriation, while $10,785.12 were expended by the City Librarian for Departments which, themselves, carried appropriations for such supplies as blank books, stationery and printing.

The distribution of The Baltimore Book continued and an edition of 20,000 copies, which came from the press in 1912 (making a total of over 30,000 issued) was sent practically all over the world. Incidently, another issue of 10,000 is now in work, and I beg to advance the suggestion that later translations into the Spanish and Portuguese languages be made for South American distribution.

The already large collection of prints, pictures, etc., at the City Library, was increased by a number of good "finds." This pictorial display of Baltimore now numbers over 2,000. It is no doubt the best and certainly the most unique collection of which any city can boast. The City Library specializes in works and data pertaining to Baltimore and Maryland, and during the year no chance was neglected to add to the store of rare books in the Library files.

Very respectfully,
WILBUR F. COYLE,
City Librarian.

CITY LIBRARIAN'S FINANCIAL STATEMENT—EXPENSE ACCOUNT

DEPARTMENTS	Stationery	Printing	Blank Books	Miscellaneous	Total
Appeal Tax Court	$356 38	$323 23	$869 66	$41 36	$1,590 63
Baltimore City Jail	125 24	164 76	179 42		469 42
City Collector	155 67	1,307 20	718 35	5 75	2,186 97
City Comptroller	115 76	485 10	111 31	14 90	727 07
City Engineer	553 94	902 69	131 87	3 15	1,591 65
City Register	88 32	653 60	154 42	5 75	902 09
City Solicitor	173 56	133 08	7 00		313 64
Commissioners for Opening Streets	36 42	112 36	5 50		154 28
Commissioners of Street Cleaning	112 97	259 65	5 75		378 37
Board of Fire Commissioners	350 10	828 25	282 81		1,461 16
Free Public Bath Commission	77 11	193 31			270 42
Harbor Board	70 24	62 50	9 85		142 59
Commissioner of Health	576 15	2,665 40	1,521 87	73 98	4,837 40
Inspector of Buildings	189 25	413 59	240 40		843 24
Juvenile Court	41 26	95 27			136 53
Mayoralty	78 47	96 97	7 85	4 80	188 09
Board of School Commissioners		2,313 57	432 65		2,746 22
Factory Site Commission	65				65
Superintendent of Lamps and Lighting	74 42	241 58	18 25		334 25
Superintendent of Public Buildings	10 07	15 35	24 60		50 02
Supervisors of City Charities	179 20	622 08	99 04	29 07	929 39
Topographical Survey	206 51	23 71	11 55		241 77
Department of Legislative Reference	36 39	21 10			57 49
City Library—Purchase of pictures and framing; purchase and binding of books and newspapers; office routine expenses, etc	144 20	183 75	56 30	2,071 84	2,456 09
People's Court	141 50	809 70	287 65	2 00	1,240 85
	$3,893 78	$12,927 80	$5,176 10	$2,252 60	$24,250 28

SALARY ACCOUNT

Appropriation, salaries		$5,272 00

EXPENDITURES

City Librarian, Wilbur F. Coyle	$2,000 00	
First Assistant City Librarian, G. Elmer Kirwan	1,000 00	
Second Assistant City Librarian, Harry L. Johnson	850 00	
Clerk, William H. Soiné	850 00	
Utility messenger, B. Preston Smith	364 00	
Delivery boy, Andrew Doyle, to January 15, 1913.	17 32	
Delivery boy, Vincent L. Clisham, from January 15 to June 24, 1913	91 73	
Delivery boy, Louis Schrieber, from June 26, 1913.	98 11	5,271 16
Unexpended balance		$0 84

AMOUNTS EXPENDED FOR OTHER DEPARTMENTS BUT NOT CHARGED TO CITY LIBRARY APPROPRIATION

DEPARTMENTS	Stationery	Printing	Blank Books	Miscel-laneous	Total
Annex Improvement Commission		$61 85	$96 50	$2 75	$161 10
Board of Park Commissioners	$92 82	323 17	340 92		756 91
Board of Public Improvements	1 20				1 20
City Engineer		13 65	88 00	18 84	120 49
City Engineer (Fallsway Viaduct)	13 13	80 10	9 25		102 48
City Register		9 90			9 90
Collector of Water Rents and Licenses	50 41	816 76	229 86		1,097 03
Electrical Commission	258 08	204 78	221 08		683 94
Paving Commission	576 62	471 07	19 34	7 47	1,074 50
People's Court		40 47	27 10		67 57
Public Wharves and Docks	132 43	24 45			156 88
Sewerage Commission	1,680 00	1,559 73	550 08	4 06	3,793 87
Supervisors City Charities		10 60			10 60
Topographical Survey (Blue Print)	999 14				999 14
Water Engineer	562 17	882 47	304 87		1,749 51
	$4,366 00	$4,499 00	$1,887 00	$33 12	$10,785 12

SUMMARY

Amount appropriated to the City Library for stationery, printing and blank books for various departments		$23,900 00
*Special appropriation from Contingent Fund for 10,000 copies of The Baltimore Book		1,650 00
Special appropriation from Contingent Fund, Expense		381 85
Appropriation, salaries		5,272 00
Amount expended for stationery, printing and blank books	$24,250 28	
Unexpended balance, Expense	1,681 57	
Amount expended for salaries	5,271 16	
Unexpended balance, Salaries	84	
Total	$31,203 85	$31,203 85

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* This amount ($1,650) was appropriated by the Board of Estimates from the Contingent Fund, for the publication of 10,000 copies of The Baltimore Book. As this work was not completed by December 31, 1913, the money was reappropriated in the Ordinance of Estimates for 1914.

Amount expended for stationery, printing and blank books for other departments, but *not charged against* City Library appropriation	$10,785 12
Amount expended for stationery, printing and blank books and *charged against* City Library appropriations	24,250 28
Total	$35,035 40

REVENUE

Sale by City Librarian of City publications, etc. (paid into City Treasury)	$94 00

FIFTY-THIRD ANNUAL REPORT

OF THE

Commissioners for Opening Streets

TO THE

MAYOR AND CITY COUNCIL OF BALTIMORE

FOR THE

FISCAL YEAR ENDING DECEMBER 31

1913

1797

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER

1914

COMMISSIONERS FOR OPENING STREETS

ANNEX IMPROVEMENT COMMISSION

EUGENE E. GRANNAN,
President.

JOHN L. SANFORD,
Commissioner.

HARRY A. REMLEY,
Commissioner.

EUGENE F. RODGERS,
Secretary.

REPORT

BALTIMORE, December 31, 1913.

To the Honorable the Mayor
and City Council of Baltimore.

GENTLEMEN:

In submitting to you this fifty-third annual report of the Department, we take pleasure in calling your attention to the large number of important street openings and closings that have been finally considered by the Commissioners, as well as those pending. The final returns have been filed with the proper officials, in accordance with the laws governing our procedure.

A résumé is given below.

The work this Department is now called upon to perform in connection with the different steps necessary for the actual acquisition of property for street beds has greatly increased, and has been executed with dispatch. Heretofore, when the Commissioners made their returns to the City Register, their work on a street proceeding ended. But this has now been materially changed, both by law and by methods introduced which may be termed inter-departmental. The Department now handles hundreds of vouchers for the payment of property interests, a large number being for property acquired by condemnation under previous boards. Under the present arrangement, our work now ceases when the street is physically opened, and in the annex portion of Baltimore city when the street is paved.

Since the first of the year final returns have been made on thirty-three street proceedings, and the list of them printed in another part of this report gives the data necessary for the use of the public. The figures showing the various amounts of damages, benefits and sums placed as portion of the city's expense are as returned by us. The changes that occur as the result of court trials are not given for obvious reasons.

Credit must be given to the City Solicitor's Department for the promptness with which abstracts of property titles have been furnished.

In our Department some of the energetic manner of expediting public improvements that characterizes the administration has been reflected, and we have succeeded in disposing of seventy-four street proceedings since the present Mayor was inducted into office.

By comparison with previous reports of the Commissioners for Opening Streets, it will be seen that the amount of work that has passed through the office for the past two years is in excess of the amount of work that was done by previous boards during the preceding twenty years.

Hilton Street (Formerly Eleventh Street).

Opening and Paving.

The history of this operation demonstrates the dual capacity in which the Commissioners for Opening Streets frequently act, viz.: as Commissioners for Opening Streets as regards the acquisition of the property for the street, and as quasi-members of the Annex Improvement Commission (the duties of which last-named Commission have been superimposed upon the former), as regards the actual physical construction.

A brief sketch is in order, for this is one of the most important pieces of work now being accomplished by this Board, as will be more readily seen when we consider the facts.

The street was first projected in the year 1907, under Ordinance No. 261, approved April 29, 1907. The first return was made on June 5, 1909, but the final return was not made until April 5, 1910 (or ten months later). The damages and expenses attendant upon the acquisition of the property amounted to $31,596.10, while the benefits assessed amounted to $6,438.85, thus leaving $25,157.25 to be borne by the municipality.

It is to be noted that there was some delay in the opening, largely due to a controversy with the Pennsylvania Railroad on account of a line of the street as originally projected which, it was claimed by the railroad, would affect the tracks, etc., of their Washington branch, and in consequence, it was deemed advisable to have a readjustment of lines, necessitating a second ordinance, in order to avoid a lengthy litigation.

The physical creation of the street was begun on June 30, 1913, under Contract No. 118, which calls for a length of 4,752 feet, or nine-tenths of a mile (Edmondson avenue to Frederick road), at a width of forty feet, to be paved with sheet asphalt on a six-inch concrete base.

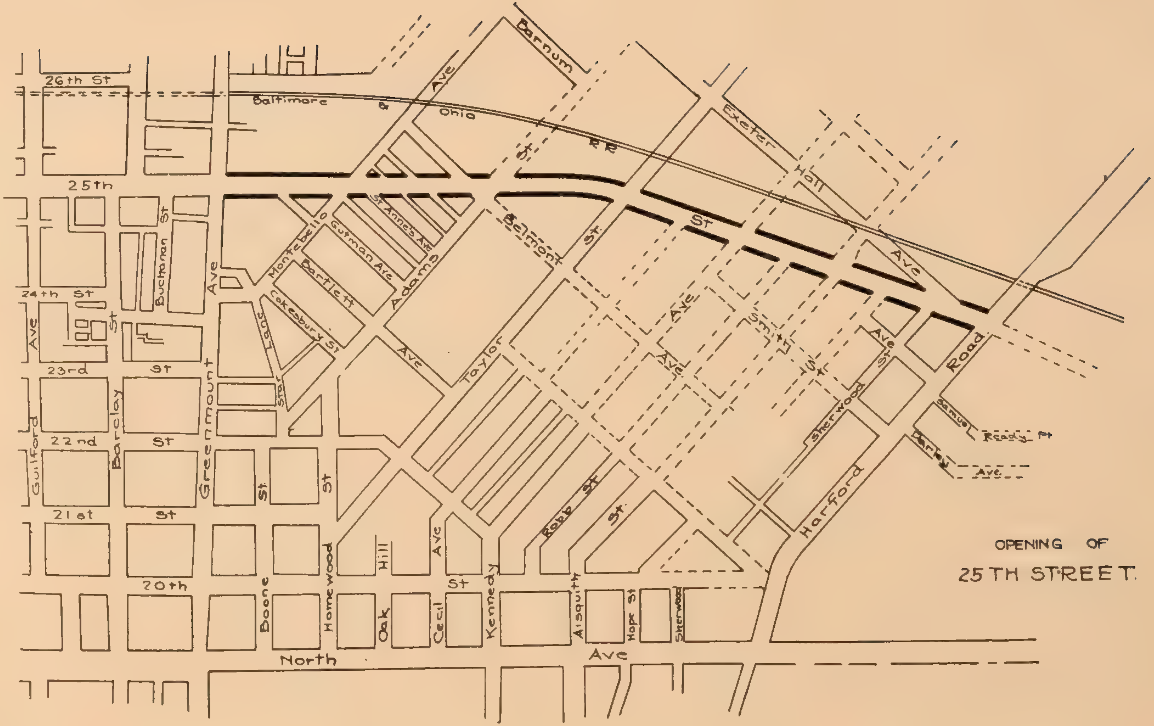
The width between building lines is seventy-five feet, but owing to an elaborate scheme of parking, the width between curbs is forty feet, as above stated. The estimated cost of this physical construction is $68,622.

The engineering problems and the necessary grading was a tedious work, and well illustrated the difficulties encountered in the construction of streets in the annex, and the time consumed occasioned thereby. Thus, in the grading of this street there were six cuts, necessitating the removal of some 36,000 cubic yards of earth and loose rock, and four fills, aggregating 58,000 cubic yards. The deepest fill was thirty-seven feet, which occurs just south of Edmondson avenue, at a point where Franklin street (if continued westwardly) would cross this opening; while the heaviest cut was some ten feet. Five culverts had to be constructed, the largest of which is ten feet by six feet of monolithic masonry, and 108 feet in length.

A glance at the map of the city, and a consideration of the topography of that section and of the through streets now available for traffic, demonstrates what has already been stated as to the great importance of this opening, for it is the only north and south opening between Frederick road and Edmondson avenue, from Pulaski street on the east to the western city boundary, and the only improved paving between Fulton avenue and the western city limits; and, connecting two of the main arteries of traffic, viz.: Edmondson avenue and Frederick road, will itself become a main artery of traffic north and south, as it becomes a connecting link for Caton avenue on the south and Poplar Grove street, which runs north from Edmondson avenue about two squares east of the said Hilton street.

The object of the Annex Improvement Commission is what its name denotes, but in the expenditure of the loan the Commission also has in view the return for investments made for street improvements by reason of the reclassification of property and the increased return in taxes occasioned thereby. Thus, by opening and paving streets we increase the rates of property under the terms of the Acts of 1908, Chapter 286, from rural to suburban, or from suburban to urban, as the case may be. Hilton street may be called an initial street opening and improvement, which will eventually bring large returns upon the investment by the reclassification of the property through which it runs, and more particularly when the area is further developed, and the interesecting cross streets are opened and paved, for as the street extends nine-tenths of a mile, the municipality will eventually acquire an increased rate of taxation through this entire area and on both sides of said street.

Among the noteworthy cases are the opening of Twenty-fifth street, from Greenmount avenue to the Harford road; Belair road, from North avenue to the eastern city limits; Green Spring Parkway, from the Reisterstown road to the northern city limits; Courtland street, from Franklin street to Centre street; Aisquith street, from Baltimore street to Fayette street; the opening of Ostend street, from Howard street to Plum alley; Liberty Heights avenue, from Reisters-


26th St
Baltimore & Ohio RR
Barnum
Exeter
Hall
Ave
St
25th
St
Belmont
St Anne's Ave
Gutman Ave
Montebello
Bartlett
Adams
Cokesbury St
Lane
Star
Taylor
Ave
Smith
St
Ave
Sherwood
Samuel
Ready Pt
Darley
Ave.
Road
Harford
Robb St
St
24th St
Buchanan
Ave
St
23rd
St
Greenmount
Barclay
22nd
St
Guilford
Ave
21st
St
20th
St
Boone
Homewood
Oak
Hill
Cecil
Ave
Kennedy
Aisquith
Hope St
Sherwood
North
Ave

OPENING OF
25TH STREET.

town road to Callaway avenue; Hillen street, from the Fallsway to High street; and the Windsor Mill road, from the old city limits to Hilton street.

Twenty-fifth Street—Greenmount Avenue to Harford Road.

One of the most important condemnation and opening proceedings which has been undertaken by the city for some time is that of the opening of Twenty-fifth street, from the easternmost side of Greenmount avenue to the northwesternmost side of the Harford Turnpike road, at a width of 100 feet. This was done by the present Commissioners for Opening Streets, under Ordinance No. 416 of the Mayor and City Council of Baltimore, approved December 9, 1909.

This opening will bring in for development purposes a large area east of Greenmount avenue (formerly known as York road), and west of the Harford road, between North avenue on the south and Gorsuch avenue on the north. With the exception of a comparatively few squares of improved property, this intervening area is mostly undeveloped land, and comprises over a mile square in extent.

When it is considered that there is no direct opening or highway leading from Greenmount avenue, which is now the main north and south artery of traffic in that vicinity, to Harford road on the east, that is, no convenient cross street between North avenue on the south to Gorsuch avenue on the north (about a mile in length), the value of this opening to all of that section of the city is very great. It will be a continuation of Twenty-fifth street, which will serve to make an important thoroughfare through that whole section.

The opening has lain for some time before the Commission. It was ultimately taken up by the present Board and the final return was made on the fifth day of November, 1913.

BELAIR ROAD.

The widening of the Belair road will be a vast improvement to the northeastern section of the city, and when it is paved by the State Roads Commission (as contemplated) will be the means of giving a much needed, smooth thoroughfare from that section to the center of the city over the improved streets already constructed.

GREEN SPRING PARKWAY.

This large opening in the northern section means additional revenue to the city when physically opened, as builders are only waiting for this improvement to be actually accomplished before proceeding with developments on a large scale.

OSTEND STREET.

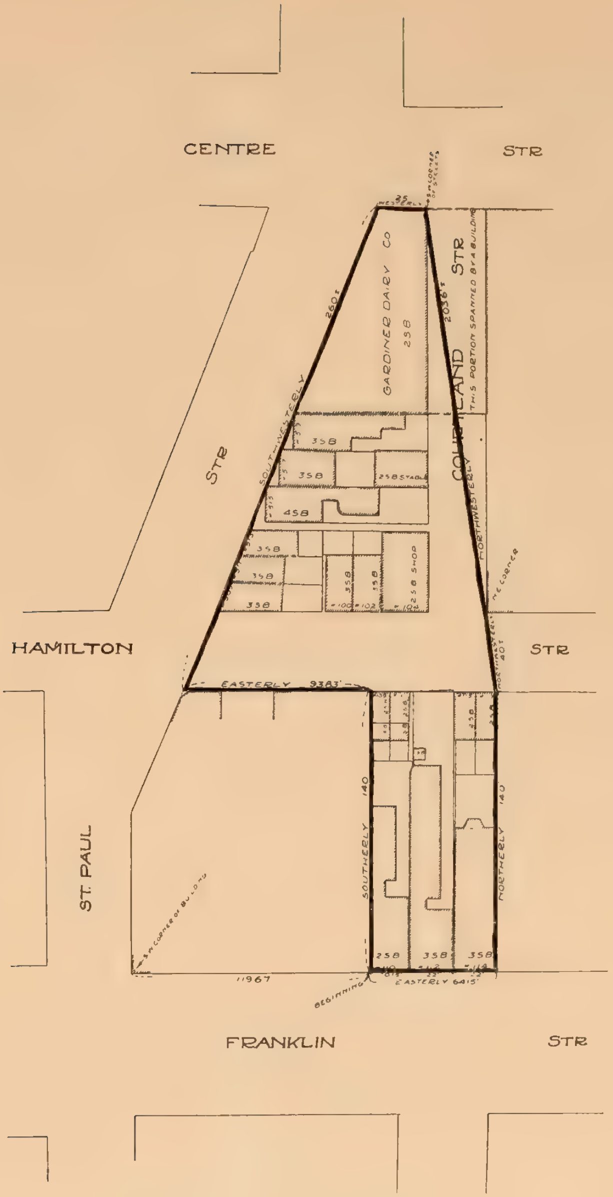
Ostend street, between Howard street and Plum alley, was opened for the purpose of giving a drive approach to the new bridge over the tracks of the Baltimore and Ohio Railroad in South Baltimore, constructed for the relief of grade crossings.

COURTLAND STREET.

The opening of Courtland street, between Franklin and Centre streets, is for the purpose of making a thoroughfare of what is now a "dead end" street. The cut shows the relief that will be afforded the increasing amount of traffic St. Paul street is now called upon to take care of.

AISQUITH STREET.

This street, opened between Baltimore and Fayette streets in the manner as illustrated, was for the relief of a dangerous situation existing in East Baltimore, where the pedestrian traffic was compelled to use a narrow street traversed by cars of the United Railways. The opening, long contemplated, is now an accomplished fact.


CENTRE STR
25 WESTERLY
S.W. CORNER OF STREETS
GARDINER DAIRY CO
258
260±
SOUTHWESTERLY
203.6±
STR
THIS PORTION SPANNED BY A BUILDING
COURTLAND
NORTHWESTERLY
STR
358
258 STABLE
458
358
358
358
358
358
258 SHOP
#100
#102
#104
N.E. CORNER
NORTHWESTERLY 40±
HAMILTON STR
EASTERLY 93.83'
ST. PAUL
140
SOUTHERLY
140
NORTHERLY
258
358
358
S.W. CORNER OF BUILDING
119.67
BEGINNING
EASTERLY 64.15'
FRANKLIN STR

OPENING OF COURTLAND ST.

Liberty Heights Avenue.

The opening of this thoroughfare, between the Reisterstown road and Callaway avenue, is most important. When paved, Garrison avenue will be relieved of much of the heavy traffic which it now carries. Hardly any one opening in recent years is as important as this one. Openings such as these mean large returns in taxes.

Hillen Street Widening.

Hillen street widening, between the Fallsway and High street, is for the purpose of giving good hauling facilities to the freight yards in the vicinity of the Fallsway. From a narrow, congested street it has been converted into a street of the usual width of streets in the down-town section.

Among the other large improvements now being considered by the Commission are the Key Highway (a description of which is given), Gwynn's Falls Parkway, from the Reisterstown road to Gwynn's Falls Park, which is in the park scheme and over a mile and a half in length; the opening of Covington street, from Ostend street to Gittings street; and the opening of Warwick avenue in West Baltimore, extending from Baltimore street to Edmondson avenue, which when physically opened and paved will be the westernmost thoroughfare connecting those important highways.

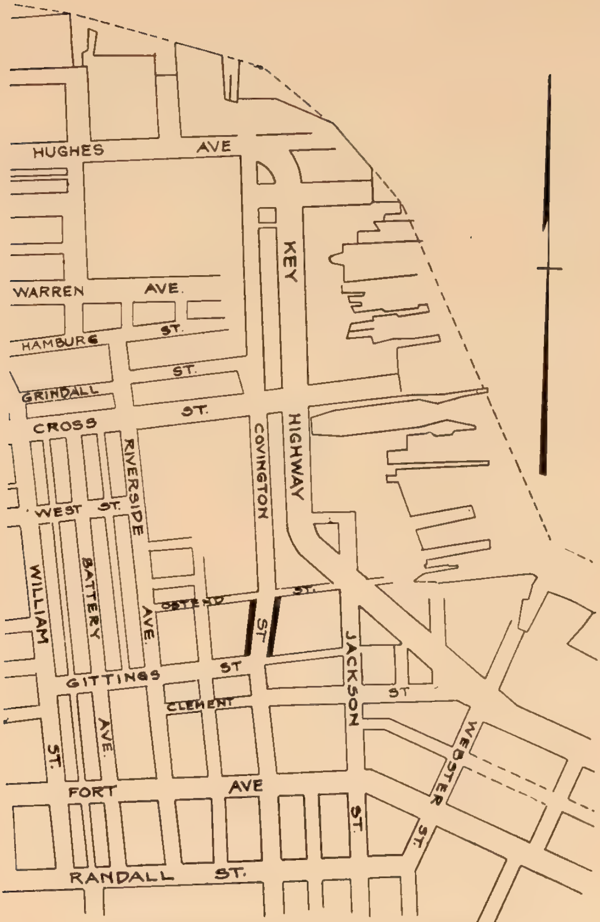
Windsor Mill Road Closing.

(From the Former Western Boundary Line to Hilton Street.)

From time to time, as the city grew to the west and northwest, this old road gave way to the march of progress. It has been closed between the points named above, and its interference with the rectangular lay-out of streets in this section has passed. It is now rapidly being built up with a good class of dwellings, and the unsightly conditions in the immediately contiguous territory are fast disappearing. After it leaves Hilton street, the western point of closing, it appears at this time, that no one will care to disturb it; fine residences line its course, and, as it strays through the Windsor Hills it has a natural beauty of its own. If one has the inclination, almost its entire length (from a point where the seven mills, built all in a row, at Windsor and which gave it its name) can be traced down through the city to where it crossed Jones Falls when Baltimore was a village. It followed the easy curves and passed around the bases of the hills, took in what is now Dark Lane and is responsible for the crookedness of Saratoga street from Gay street west. An eminent examiner of titles has declared that this was once an Indian trail, well defined, and that it led past the stockade, then built near where the Y. M. C. A. building stands at Charles and Saratoga streets to protect the inhabitants from the raids of the Susquehannas, over the land occupied by old St. Paul's Church, and so on down over the meadows where the stream then flowed across Calvert street at the foot of the hill.

Gwynn's Falls Parkway.

The proceedings for the opening of this street have laid in this office for a number of years, and were not taken up for consideration until this year. The opening is a park scheme, and when completed, will extend from the Reisterstown road to Gwynn's Falls Park. A large number of expensive properties are taken in this opening, and while the final return has not yet been made, at the time of writing this report the same is expected to be filed with the City Register about the latter part of January. This opening will provide a boulevard 120 feet in width. It was designed by the Olmstead Brothers of Boston, and provides large circles of 200 feet in diameter at certain points, and where it meets Gwynn's Falls Park at its western end, will be over 400 feet in width.


HUGHES AVE
WARREN AVE.
HAMBURG ST.
ST.
GRINDALL ST.
CROSS
KEY
HIGHWAY
COVINGTON
RIVERSIDE AVE.
WEST ST.
WILLIAM ST.
BATTERY AVE.
OSTEND ST.
ST
JACKSON ST.
GITTINGS ST
CLEMENT ST
WEBSTER ST.
FORT AVE
RANDALL ST.

COMMISSIONERS FOR OPENING STREETS.

OPENING OF

COVINGTON STREET.

OSTEND ST. TO GITTINGS ST.

C.W.K.

Covington Street Opening.

(From Ostend to Gittings Streets.)

This opening, while not a long one, being only some 298.55 feet in length, is highly necessary, since it serves to connect the two parts of the same street, and is the link which serves to complete Covington street—a street which will now extend from Donaldson street to Hughes street.

This opening runs partly on the bed of an older Covington street, whose lines were northwardly and direct projections of the lines of that portion of the street south of Gittings street. If the street had been constructed on these old lines it would happen that the east side of the street, as extended, would be on the west side of Covington street at Ostend; so in order to make a proper connection, it became necessary to make a slight angle, which necessitated this condemnation proceeding, as otherwise the city claims the bed of the older projected Covington street between these points.

The physical construction of the street belongs to other departments, as the Commissioners for Opening Streets, acting as Annex Improvement Commission, only physically constructs streets in the Annex portion of Baltimore city, and this street is in the old line of the municipality.

We are glad to report that actual construction work has been started on Thirty-third street, and the work is progressing favorably.

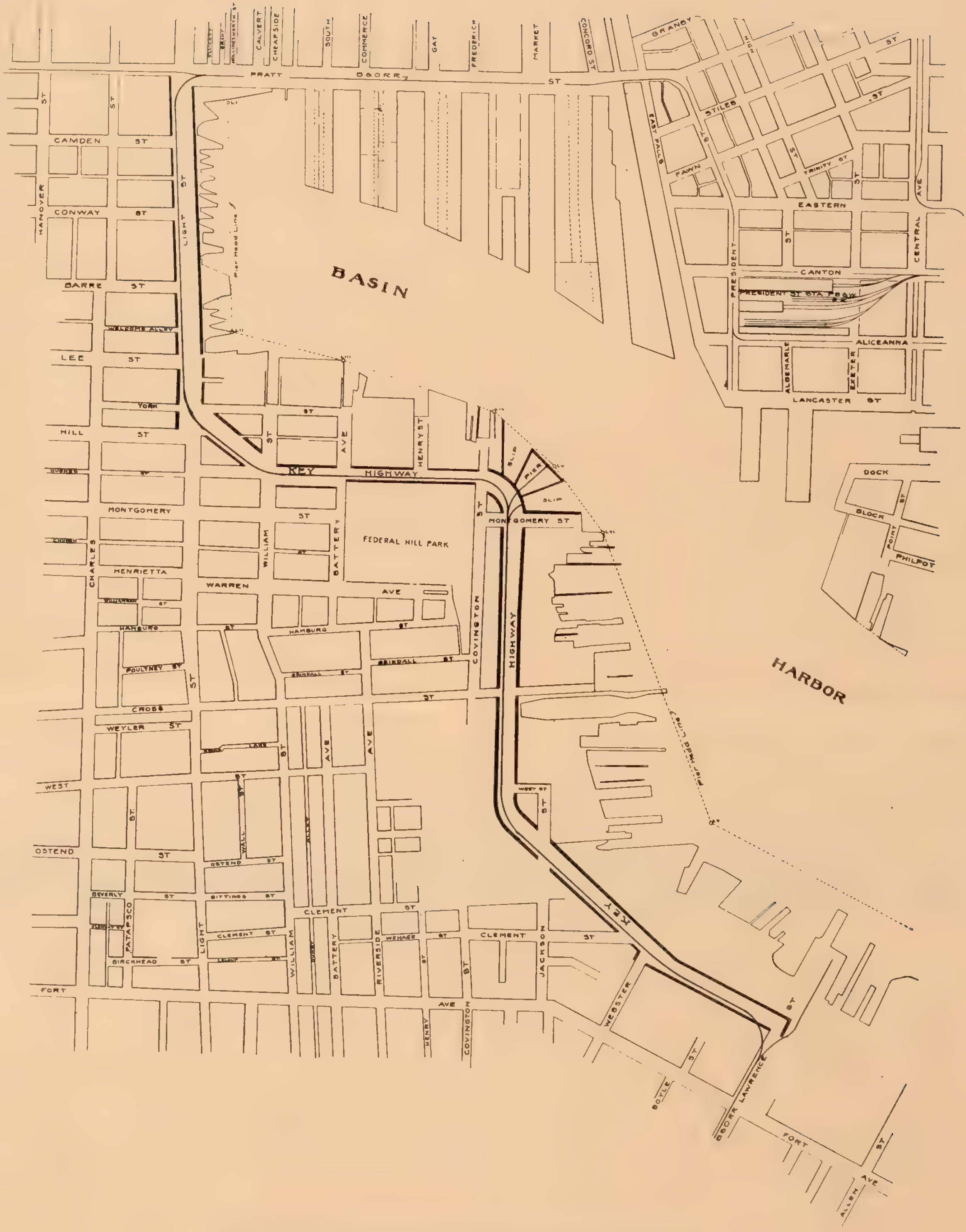
Along with this work has proceeded the paving of streets in the Annex. During the year the engineering forces of the Department have paved forty-five streets which, calculated on a basis of thirty feet in width, totals nearly eight miles of finished roadway. While the mileage does not appear large by comparison with the work of other departments, the fact that street paving in the Annex is in almost every instance through territory that is practically virgin, must not be overlooked.

A glance at the pictures printed in the Engineer's report shows the obstacles encountered. The practical construction of paving in the Annex becomes very heavy and difficult at times, owing to the uneven laying condition of the land, and in carrying out the work it frequently becomes necessary to cope with the removal of heavy excavations and the filling in of enormous ravines, the construction of important and expensive culverts, etc. Fills, sometimes thirty-seven feet in height, have to be made in some cases, and the necessary drainage has to be provided for. A study of the tables given will show the large amount of grading necessary to be done before the surface of the streets can be laid.

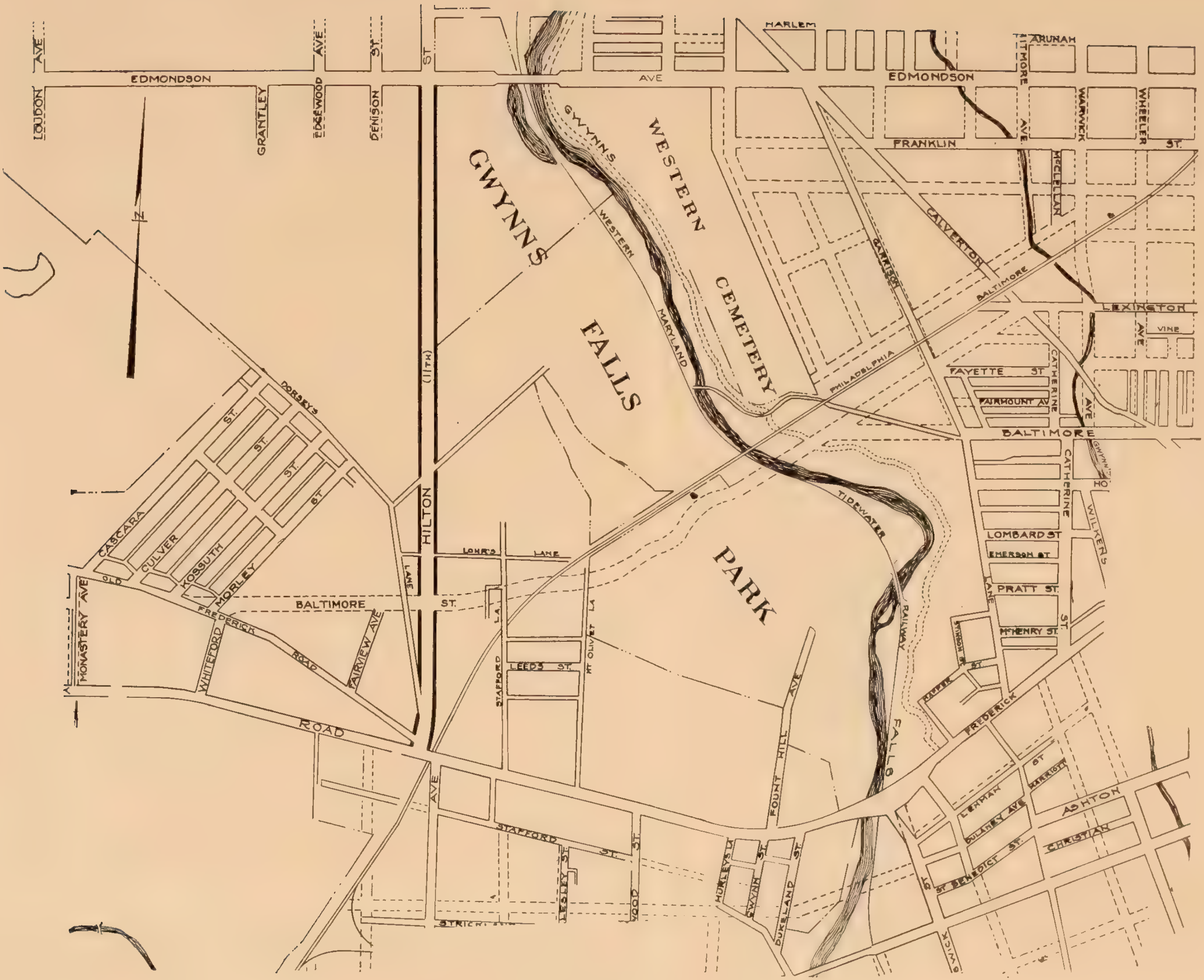
Since the commencement of paving by the Department under the old loan, together with that under the present loan, the records of the Commission show a total of forty-eight miles of streets paved on a basis of thirty-foot width.

The taxable basis of the city has been raised many millions of dollars by reason of such paving. In a consideration of the paving of streets in the Annex, the Commission has adhered closely to the policy of increasing the tax rate and has kept in touch with the Appeal Tax Court, with which we advise as to streets, which if improved, would bring about the results desired.

The map attached to the report shows in red the streets paved under the direction of the Board.


BASIN
HARBOR
FEDERAL HILL PARK
KEY HIGHWAY
PRATT ST
LIGHT ST
MONTGOMERY ST
COVINGTON ST
HENRY ST
BATTERY AVE
WILLIAM ST
WARREN AVE
HAMBURG ST
GRINDALL ST
CROSS ST
WEYLER ST
WEST ST
OSTEND ST
CLEMENT ST
RIVERSIDE AVE
WEBSTER ST
JACKSON ST
BOYLE ST
LAWRENCE ST
FORT AVE
ALLEN ST
CHARLES ST
HANOVER ST
CAMDEN ST
CONWAY ST
BARRE ST
LEE ST
YORK
HILL ST
HENRIETTA
POULTNEY ST
PATAPSCO
BIRCKHEAD ST
BEVERLY
GITTINGS ST
WALL
HENRY
WEHAGE
CONCORD ST
MARKET
FREDERICK
GAY
COMMERCE
SOUTH
CHEAPSIDE
CALVERT
HOLLINGSWORTH ST
GRANBY
HIGH
STILES
FAWN
EAST FALLS
TRINITY ST
EASTERN
PRESIDENT
CANTON
PRESIDENT ST STA. P.B.&W.
ALICEANNA
ALBEMARLE
EXETER
LANCASTER ST
CENTRAL AVE
DOCK
BLOCK
POINT
PHILPOT
PIER
SLIP
Pier Head Line

OPENING OF KEY HIGHWAY (2ND SECTION)


AVE
AVE
ST.
ST.
HARLEM
ARUNAH
EDMONDSON
AVE
EDMONDSON
LOUDON
GRANTLEY
EDGEWOOD
DENISON
ATMORE
AVE
WARWICK
WHEELER
FRANKLIN
ST.
McCLELLAN
N
GWYNNS
WESTERN
GWYNNS
WESTERN
CEMETERY
CALVERTON
GARRISON
BALTIMORE
LEXINGTON
AVE
VINE
FALLS
MARYLAND
PHILADELPHIA
FAYETTE ST
CATHERINE
FAIRMOUNT AV
AVE
BALTIMORE
GWYNNS
HO
CATHERINE
WILKENS
DORSEYS
ST.
ST.
ST.
ST.
(11TH)
HILTON
CASCARA
CULVER
KOSSUTH
MORLEY
OLD
FREDERICK
ROAD
LANE
LOHR'S
LANE
BALTIMORE
ST.
TIDEWATER
PARK
LOMBARD ST
EMERSON ST
PRATT ST.
LANE
McHENRY ST.
ST.
RAILWAY
MONASTERY AVE
WHITEFORD
FAIRVIEW AVE
STAFFORD
LA
LEEDS ST.
MT OLIVET LA
AVE
FOUNT HILL
FALLS
NORMAN
ST.
HARPER
FREDERICK
ROAD
AVE
ST
LEHMAN
MARRIOTT
DULANEY AVE
ASHTON
CHRISTIAN
ST. BENEDICT ST.
ST
STAFFORD
ST.
ST.
LESLEY ST.
WOOD
HURLEYS LA
GWYNN
ST.
DUKELAND
ST.
WICK
STRICKER

ELLICOTT DRIVEWAY

STREETS OPENED AND CLOSED UNDER ORDINANCES OF THE MAYOR AND CITY COUNCIL.

Names of Streets.	Damages and Expenses.	Benefits.	Amounts on Mayor and City Council.
Twenty-fifth street, from Greenmount avenue to the Harford road. Ordinance No. 416, approved December 9, 1909. Final return November 5, 1913.........	$99,687 94	$75,575 00	$24,112 94
Belair road, from North avenue to the eastern city limits. Ordinance No. 679, approved April 25, 1911. Final return October 3, 1913	89,382 76	34,486 70	54,896 06
Ashburton street, from North avenue to Lafayette avenue. Ordinance No. 669, approved April 18, 1911. Final return September 22, 1913..................	20,149 05	17,943 50	2,205 55
Park Hill avenue, from Green Spring avenue to Park Heights avenue. Ordinance No. 704, approved May 15, 1911. Final return May 26, 1913...	$7,918 48	7,673 50	244 98
Dukeland street, from Presbury Street to Lafayette avenue. Ordinance No. 624, approved January 9, 1911. Final return May 9, 1913	24,076 03	19,196 25	4,879 78
McPhail street, from 400 feet northwest of Frederick road to Hollins street. Ordinance No. 65, approved January 3, 1912. Final return April 15, 1913.	2,901 38	2,486 00	415 38

STREETS OPENED AND CLOSED UNDER ORDINANCES OF THE MAYOR AND CITY COUNCIL.

Names of Streets.	Damages and Expenses.	Benefits.	Amounts on Mayor and City Council.
Longwood (Eighth) street, from Westwood avenue to Baker street. Ordinance No. 64, approved January 3, 1912. Final return June 17, 1913	$4,426 52	$3,182 35	$1,244 17
Hilton (Eleventh) street, from Frederick road northwardly. Ordinance No. 126, approved June 6, 1912. Final return May 15, 1913	3,048 84	20 00	3,028 84
Hillen street, from the Fallsway to High street. Ordinance No. 219, approved December 28, 1912. Final return December 8, 1913	38,392 71	15,193 00	23,199 71
Adams street, from Homewood avenue to Twenty-fifth street. Ordinance No. 109, approved May 27, 1912. Final return April 30, 1913	18,516 54	8,853 00	9,663 54
Twenty-eighth street, from Huntingdon avenue to Maryland avenue. Ordinance No. 120, approved June 4, 1912. Final return June 12, 1913	8,117 92	7,071 00	1,046 92
Curley street, from Fayette street to Philadelphia avenue. Ordinance No. 137, approved July 3, 1912. Final return May 15, 1913	2,383 74	1,845 05	538 69

STREETS OPENED AND CLOSED UNDER ORDINANCES OF THE MAYOR AND CITY COUNCIL.

Names of Streets.	Damages and Expenses.	Benefits.	Amounts on Mayor and City Council.
Green Spring Parkway, from the Reisterstown road to the northern city limits. Ordinance No. 181, approved November 25, 1912. Final return October 27, 1913	$96,025 46	$89,888 50	$6,136 96
Woodberry avenue, from Railroad avenue westwardly 485 feet. Ordinance No. 186, approved November 25, 1912. Final return May 26, 1913.......	1,454 66	1,260 85	193 81
Liberty Heights avenue, from the Reisterstown road to Callaway avenue. Ordinance No. 179, approved November 19, 1912. Final return June 16, 1913.	56,027 91	50,921 80	5,106 11
Lakewood avenue, from Madison street to Ashland avenue. Ordinance No. 195, approved December 10, 1912. Final return December 11, 1913........	6,408 40	6,400 00	8 40
Luzerne avenue, from Madison Street to the land of the Union Railroad Company. Ordinance No. 198, approved December 10, 1912. Final return November 17, 1913...........	10,512 19	10,184 90	327 29
Ostend street (formerly Stockholm street), from Howard street to Plum alley. Ordinance No. 266, approved May 17, 1913. Final return September 25, 1913..................	254 10	....	254 10

STREETS OPENED AND CLOSED UNDER ORDINANCES OF THE MAYOR AND CITY COUNCIL.

Names of Streets.	Damages and Expenses.	Benefits.	Amounts on Mayor and City Council.
Linwood avenue, from Boston street to the Patapsco river. Ordinance No. 284, approved June 9, 1913. Final return September 24, 1913..................	$272 66	$4 00	$268 66
Courtland street, from Franklin street to Centre street. Ordinance No. 330, approved July 23, 1913. Final return December 4, 1913...........	58,372 25	38,581 50	19,790 75
Aisquith Street, from Baltimore street to Fayette street. Ordinance No. 331, approved July 23, 1913. Final return October 25, 1913...............	13,957 33	....	13,957 33

STREETS CLOSED.

Names of Streets.	Damages and Expenses.	Benefits.	Amounts on Mayor and City Council.
Windsor Mill road, from Payson street to the Bloomingdale road. Ordinance No. 534, approved June 6, 1910. Final return February 13, 1913....	$3,911 84	$3,911 84	....
Church street, from Poplar Grove street to ten-foot alley north of Edmondson avenue. Ordinance No. 282, approved June 9, 1913. Final return September 25, 1913...........	169 87	169 87	....
Nursery alley, south of Preston street. Ordinance No. 325, approved July 16, 1913. Final return October 7, 1913.....:..........	189 91	1 00	$188 91
Barre street, from Eutaw street to 100 feet east of Howard street. Ordinance No. 387, approved August 16, 1909. Final return November 13, 1913.	602 34	602 34	....
Conway street, from the east side of Howard street to 100 feet east of Howard street. Ordinance No. 387, approved August 16, 1909. Final return November 13, 1913...........	642 83	642 83	....
Patapsco avenue, from York street to Hill street. Ordinance No. 387, approved August 16, 1909. Final return November 13, 1913.	1,777 78	1,777 78	....

STREETS CLOSED.

Names of Streets.	Damages and Expenses.	Benefits.	Amounts on Mayor and City Council.
Perry street, from the east side of Howard street to 100 feet east of Howard street. Ordinance No. 387, approved August 16, 1909. Final return November 13, 1913..........	$1,040 99	$1,040 99	....
Howard street, from Hill street to Camden street. Ordinance No. 387, approved August 16, 1909. Final return November 14, 1913	12,241 56	12,241 56	....
Spring Garden avenue, from York street to Hill street. Ordinance No. 387, approved August 16, 1909. Final return November 13, 1913	1,920 83	1,920 83	....
Wayne street, from the east side of Howard street to 100 feet east thereof. Ordinance No. 387, approved August 16, 1909. Final return November 13, 1913.	180 36	180 36	....
Welcome alley, from Eutaw street to 100 feet east of Howard street. Ordinance No. 387, approved August 16, 1909. Final return November 13, 1913.	1,290 63	1,290 63	....
York street, from Eutaw street to Sharp street. Ordinance No. 387, approved August 16, 1909. Final return November 13, 1913	5,474 94	5,474 94	....

The following preliminary plats were received during the year:

For Opening.

Aisquith street, from Baltimore street to Fayette street.
Alameda, The, from Harford road to Thirty-third street.
Brunswick street, from Lehman street to the Frederick road.
Broadway, at the southeast corner of Broadway and Thames street.
Baltimore street, from Garrison lane to the property of the Mayor and City Council of Baltimore.
Courtland street, from Franklin street to Centre street.
Curley street, from Monument street to McElderry street.
Covington street, from Fifth lane (Ostend street) to Gittings street.
Elwood avenue, from McElderry street to Philadelphia avenue.
Elgin avenue, from Reisterstown road to Pulaski street.
Hamburg street, from Bush street to Stockholm street.
Hudson alley, from Preston street to Mount Royal avenue.
Jefferson street, westerly from the west side of Loney's lane.
Key Highway (second section), from Montgomery street to Lawrence street.
Luzerne avenue, from Biddle street to the right-of-way of the Union Railroad Company.
Linwood avenue, from Boston street to the Patapsco River.
Monastery avenue, from Frederick road to Old Frederick road.
Mills road, from Chestnut avenue and Thirty-third street to Railroad avenue and Woodberry avenue.
Ostend street, from Howard street to Plum alley.
Potomac street, from Baltimore street to Fairmount avenue.
Spring Garden avenue, from Hanover street to Light street.
Streeper street, from McElderry street to Madison street.
Wicomico street, from Bush street to Stockholm street.
Wyanoke avenue, from Greenmount avenue to Pen Lucy avenue.
Wolfe street, from North avenue to the Harford road.

For Closing.

Church street, from Poplar Grove street to a ten-foot alley north of Edmondson avenue.
Harford road, closing several portions of.
Logan street, from Linwood avenue to Potomac street.
Nursery alley, in the vicinity of Preston street.

The following ordinances were received during the year:

No. 366—An ordinance accepting the dedication of Potomac street, from the north side of Baltimore street to the south of Fayette street, and declaring the same a public street. Approved November 20, 1913.

No. 365—An ordinance to condemn and open a highway, from Chestnut avenue and Thirty-third street to Railroad avenue and Woodberry avenue; said highway to have a width varying from eighty feet to about 141 feet, and to include the whole of the present bed of Thirty-third street (formerly First avenue), as now opened sixty feet wide westerly from Chestnut avenue, and also to include the whole of the present bed of Ash street (formerly Druid avenue), from Clipper Heights avenue to a point about 250 feet northerly from Thirty-sixth street, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the fourteenth day of May, 1913, and now on file in said office, and to name said public highway Mills road. Approved November 18, 1913.

No. 344—An ordinance, in pursuance of the Act of 1910, Chapter 736, of the General Assembly of Maryland, to authorize the Annex Improvement Commission, constituted by said Act, to grade, curb and pave with improved pavement certain streets; the expenses thereof to be paid out of the proceeds of the loan provided for by said Act. Approved October 2, 1913.

No. 343—An ordinance, in pursuance of the Act of 1910, Chapter 736, of the General Assembly of Maryland, to authorize the Annex Improvement Commission, constituted by said Act, to grade, curb, park and pave with improved pavement, Thirty-third street, from the east side of Charles street (except the portion next to Charles street already improved) to the west side of the Hillen road, the expenses thereof to be provided for as follows: $50,000 from the appropriation for that purpose to the Board of Park Commissioners in the Ordinance of Estimates for 1913, and the balance to be paid out of the Annex Loan provided by Chapter 736 of the Act of 1910, and out of the appropriation made therefrom in the Ordinance of Estimates for 1913. Approved October 2, 1913.

No. 353—An ordinance to condemn and open Monastery avenue, from the northernmost side of Frederick road to the southernmost side of Old Frederick road, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the fifteenth day of May, 1913, and now on file in said office. Approved October 27, 1913.

No. 342—An ordinance to condemn, widen and grade Brunswick street, from Lehman street to the southeast side of Frederick road, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the eleventh day of April, 1913, and now on file in said office. Approved September 30, 1913.

No. 337—An ordinance to condemn and open Wolfe street, from North avenue to Harford road, with a width in part of seventy feet, and in part of sixty feet, in accordance with the plat thereof filed in the office of the Commissioners for Opening Streets on the third day of January, 1913, and now on file in said office. Approved September 10, 1913.

No. 335—An ordinance to condemn, open and grade the Alameda, from the northwesternmost side of Harford road to the southernmost side of Thirty-third street, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the twenty-eighth day of February, 1913, and now on file in said office, and to repeal Ordinance No. 227 of the Mayor and City Council of Baltimore, approved December 11, 1908. Approved August 22, 1913.

No. 331—An ordinance to condemn, open, widen and extend Aisquith street, from Baltimore street to Fayette street; said Aisquith street, between Fayette street and Laurel street to be widened from about forty feet to about 100 feet, and between Laurel street and a point fifty feet southerly therefrom to be widened on the west side from its present width of twenty-seven feet to forty feet on the south side of Laurel street and decreasing to its present width, and between Laurel street and Baltimore street to be widened from its present width on the east side of McKim School of twenty-seven feet, by the opening of a strip on the west side of McKim School of forty feet, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the twenty-third day of May, 1913, and now on file in said office. Approved July 23, 1913.

No. 330—An ordinance to condemn, open, extend and widen Courtland street, from the north side of Franklin street to Hamilton street, with a width of sixty-four feet, and from Hamilton street to the south side of Centre street, with a varying width, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the twenty-eighth day of April, 1913, and now on file in said office. Approved July 23, 1913.

No. 327—An ordinance to repeal Ordinance No. 417 of the Mayor and City Council of Baltimore, approved December 9, 1909, entitled "An ordinance to condemn and open Twenty-sixth street, from the southwest side of Huntingdon to the southwest side of Hampden avenues, if extended southeasterly, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the twentieth day of March, 1909, and now on file in said office." Approved July 16, 1913.

No. 326—An ordinance accepting the dedication of Elsinore avenue, from Windsor Mill road to Duvall avenue; Beech avenue, from Garrison avenue to Elsinore avenue; Mondawmin avenue, from Garrison avenue to Elsinore avenue; Piedmont avenue, from Roslyn avenue to Elsinore avenue; Alto avenue, from Garrison avenue to Elsinore avenue; Bateman avenue, from Garrison avenue to Elsinore avenue, and Carlisle avenue, from Garrison avenue to Elsinore avenue. Approved July 16, 1913.

No. 325—An ordinance to condemn and close a portion of Nursery alley (formerly Little Forrest street) south of Preston street, and authorizing the Mayor and City Council to accept a deed from the Industrial Building Company of a small triangular piece of ground on the west side of the present Nursery alley, the same to become a part of Nursery alley, for the purpose of widening and straightening said Nursery alley at the point in question, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the second day of May, 1913, and now on file in said office. Approved July 16, 1913.

No. 322—An ordinance to repeal Ordinance No. 698, approved May 15, 1911, entitled "An ordinance to condemn and open Taylor street, from the easternmost side of Homewood avenue to the southwesternmost side of the Alameda, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the twenty-third day of May, 1910, and now on file in said office." Approved July 16, 1913.

No. 321—An ordinance to provide for the establishment of a public square or garden on the east side of the Fallsway, between Biddle street and Preston street, and for the acquisition, for that purpose, of the properties Nos. 303 and 305 East Preston street. Approved July 16, 1913.

No. 320—An ordinance to repeal and reordain, with amendments, paragraph 7 of Section 3 and paragraphs 6 and 7 of Section 3½ of Ordinance No. 386, of the Mayor and City Council of Baltimore, approved August 16, 1909, commonly known as the "Grade Crossing Ordinance." Approved July 16, 1913.

No. 314—An ordinance to declare Lansing avenue, between Rutland avenue and Regester street to be a public highway of the City of Baltimore, and accepting the dedication thereof. Approved July 16, 1913.

No. 310—An ordinance to condemn and open Wyanoke avenue, from the east side of Greenmount avenue to the northwest side of Pen Lucy avenue, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the twenty-seventh day of February, 1913, and now on file in said office. Approved July 16, 1913.

No. 301—An ordinance to condemn and open Luzerne avenue, seventy feet wide, from the south side of Biddle street to the south outline of the land belonging to the Union Railroad Company of Baltimore, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the nineteenth day of March, 1913, and now on file in said office. Approved July 2, 1913.

No. 295—An ordinance to condemn and open Spring Garden avenue, from the east side of Hanover street to the west side of Light street, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the fourth day of February, 1913, and now on file in said office. Approved June 25, 1913.

No. 283—An ordinance to declare Cromwell street, between Charles and Light streets, to be a public highway of the City of Baltimore, and accepting the dedication thereof. Approved June 9, 1913.

No. 282—An ordinance to condemn and close Church street, from the east side of Poplar Grove street to the north side of a ten-foot alley north of Edmondson avenue, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the seventeenth day of March, 1913, and now on file in said office. Approved June 9, 1913.

No. 284—An ordinance to condemn and open Linwood avenue, from Boston street to the Patapsco River, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the tenth day of February, 1913, and now on file in said office. Approved June 9, 1913.

No. 279—An ordinance to repeal Ordinance No. 605, approved December 16, 1910, entitled "An ordinance to condemn and open Remington avenue, from the southeast side of Twenty-eighth street to the west side of Oak street, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the seventh day of September, 1910, and now on file in said office." Approved June 4, 1913.

No. 277—An ordinance accepting the dedication of Penrose street, from Fulton avenue to Monroe street. Approved June 4, 1913.

No. 259—An ordinance to declare Smallwood street, from Walbrook avenue to Clifton avenue; Clifton avenue, from Pulaski street to Monroe street; Hilton street, from the alley south of Windsor avenue to Windsor avenue; Thirty-eighth street, from Elm avenue to Roland avenue; Thirty-sixth street, from Falls road to Ash street; Sycamore avenue, from Thirty-sixth street to Union avenue; Twenty-third street, from Montebello avenue to Cokesbury avenue; Hickory avenue, from Thirty-sixth street to Thirty-eighth street; Westwood avenue, from Eighth street to Ninth street; Guilford avenue, from Twenty-seventh street to Twenty-ninth street; Cleveland avenue, from Garrison avenue to Liberty Heights avenue; Callaway avenue, from Garrison avenue to Liberty Heights avenue; Dumbarton avenue, from Starr lane eastwardly 450 feet; Cator avenue, from Starr lane eastwardly 1,400 feet; Parkwyrth avenue, from Starr lane eastwardly 422 feet; Hilton street, from Liberty Heights avenue to Powhatan avenue; Twenty-ninth street, from Guilford avenue to Greenmount avenue; Moreland avenue, from North avenue to Presbury street; Thomas avenue, from North avenue to Presbury street; Franklin Terrace, from Greenmount avenue to Starr lane; Gordon avenue, from Starr lane to a point 1,300 feet eastwardly thereof; Walbrook avenue, from Edgewood avenue to Grantley street, to be public highways of the City of Baltimore, and accepting the dedication thereof. Approved April 25, 1913.

No. 270—An ordinance to condemn and close portions of Centre and Front streets, lying between the easternmost corner of High and Front streets and a point on the northeast side of Centre street, one hundred and sixty-eight feet northwest of Front street, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the twenty-fourth day of July, 1912, and now on file in said office. Approved May 22, 1913.

No. 266—An ordinance to condemn, open, widen and grade Ostend street (formerly Stockholm street), from the southeast side of Howard street to the northwest side of Plum alley, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the fourteenth day of January, 1913, and now on file in said office. Approved May 17, 1913.

No. 267—An ordinance to change the name of Bohemia Court to Lincoln Court. Approved May 17, 1913.

No. 263—An ordinance to condemn and open a street to be known as Eager Place, fifty feet wide, from the east side of Milton avenue to Glover street, as proposed to be opened, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the twenty-seventh day of September, 1911, and now on file in said office. Approved May 10, 1913.

No. 262—An ordinance to condemn and open Glover street; forty feet wide, from the north side of Madison street to the northeast side of Eager Place, as proposed to be condemned and opened fifty feet wide, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the twenty-seventh day of September, 1911, and now on file in said office. Approved May 6, 1913.

No. 255—An ordinance to declare Wellington street, between Chestnut and Elm avenues, to be a public highway of the City of Baltimore, and accepting the dedication thereof. Approved April 19, 1913.

No. 254—An ordinance to declare the Reisterstown road, ninety-one feet wide, from Liberty road to Park Heights avenue, to be a public highway of the City of Baltimore, and accepting the dedication thereof. Approved April 19, 1913.

No. 261—An ordinance to condemn and open the South Baltimore Highway, or Riverfront street, from the southernmost side of Montgomery street to the southeasternmost side of Lawrence street, in continuation of the Highway as heretofore opened to Montgomery street under Ordinance No. 682, approved May 3, 1911, and to name said highway Key Highway. Approved April 28, 1913.

No. 258—An ordinance authorizing the Mayor and City Council of Baltimore to execute a deed conveying to the Roland Park Company all the right, title and interest of the Mayor and City Council of Baltimore in certain portions of the beds of Thirty-fourth street, Thirty-fifth street and Lovegrove alley, heretofore condemned and closed, and no longer needed for public use. Approved April 25, 1913.

No. 257—An ordinance, in pursuance of the Act of 1910, Chapter 736, of the General Assembly of Maryland, to authorize the Annex Improvement Commission, constituted by said Act, to grade, curb and pave with improved pavement, Thirtieth street, from Calvert street to Guilford avenue, and other streets, the expenses thereof to be paid out of the proceeds of the loan provided for by said Act. Approved April 23, 1913.

No. 256—An ordinance to condemn and open Curley street, sixty feet wide, from the south side of McElderry street to the north side of Jefferson street, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the thirteenth day of December, 1912, and now on file in said office. Approved April 22, 1913.

No. 248—An ordinance to repeal and reordain, with amendments, Section 3 of Ordinance No. 682, approved May 3, 1911, entitled "An ordinance providing for the condemnation and opening of a street, pursuant to the provisions of Chapter 485 of the Acts of 1910 of the General Assembly of Maryland, and approving the proposed grades." Approved April 3, 1913.

No. 247—An ordinance to declare Springdale avenue, from Callaway avenue to Grantley street; Grantley street, from Forest avenue to Fairview avenue; Fairview avenue, from Grantley street to Callaway avenue, and Forest avenue, from Grantley street to Callaway avenue to be public streets of the City of Baltimore, and accepting the dedication thereof. Approved April 3, 1913.

No. 223—An ordinance to condemn and widen Pennsylvania avenue, from a point 586.93 feet northwest of Fulton avenue to Liberty Heights avenue; and Reisterstown road, from Liberty Heights avenue to the northern boundary of Baltimore city, in accordance with a plat thereof filed in the office of the Commissioners for Opening streets on the eighteenth day of December, 1912, and now on file in said office. Approved February 18, 1913.

No. 225—An ordinance to repeal Ordinance No. 397, approved October 22, 1909, entitled "An ordinance to condemn and widen Saratoga street, on the southwest side thereof, between Holliday and Gay streets, in accordance with a plat thereof filed in the office of the Commissioners for Opening Streets on the sixteenth day of March, 1909, and now on file in said office." Approved February 10, 1913.

No. 384—An ordinance confirming and declaring the name of the thoroughfare heretofore and now known as Belmont avenue, from Poplar Grove street to Rosedale avenue, or Ninth street, to be Belmont avenue and changing the legal name of Lorman street, between Poplar Grove street and Rosedale avenue, or Ninth street, to Belmont avenue. Approved December 30, 1913.

LAWS RELATING TO COMMISSIONERS FOR OPENING STREETS AND THE ANNEX IMPROVEMENT COMMISSION.

Act 1898, Ch. 123; 1912, Ch. 32.

Section 172. The Commissioners for Opening Streets shall be the second Sub-Department of Review and Assessment, and the head of this sub-department shall be a board composed of three persons, appointed by the Mayor in the manner prescribed in Section 25 of this article, and removable as therein provided. One of their number shall be president, and shall be so designated when appointed by the Mayor. Their term of office shall be for three years, one Commissioner to retire every year; except that the Commissioners first appointed shall determine by lot their terms of office, so as to provide for the termination of the term of one Commissioner each at the end of the first and second years. The said Commissioners shall receive a salary of one thousand, eight hundred dollars each per annum, payable monthly. The said Commissioners shall be charged with the duty of opening, extending, widening, straightening and, if the ordinance so provides, grading or closing any street, lane, alley or part thereof, situated in Baltimore city whenever the same shall have been directed by ordinance to be done, and shall perform such other duties as the Mayor and City Council of Baltimore may, by ordinance prescribe. The said Commissioners shall appoint a clerk, who shall be paid a salary of one thousand five hundred dollars per annum, payable monthly, and shall perform such duties as the Commissioners may prescribe. The said Commissioners may also appoint such other employees as the Mayor and City Council of Baltimore by ordinance may direct, and fix their compensation, not to exceed in the aggregate the amount appropriated by ordinance.

Section 173. The clerk of said Commissioners shall keep a record of their proceedings in a book provided for the purpose, and in such form as the City Solicitor may prescribe; and the said clerk shall record in said book all orders made by the Commissioners in regard to the performance of their duties, and make true copies of all notices by them directed to be published, and of the certificate of the publication thereof, and shall perform such other clerical duties as the said Commissioners shall require.

Act 1898, Ch. 123; 1912, Ch. 32.

Section 174. When the said Commissioners shall assess a sum of money to be paid by any person or persons, for benefits derived by such person or persons from opening, extending, widening, straightening, grading, curbing or closing any street, lane or alley, or part thereof, and shall assess a sum of money to be paid to the same person or persons for damages sustained by said opening, extending, widening, straightening or closing, it shall and may be lawful, upon a certificate of title from the City Solicitor, for the City Register or City Collector to receive from such person or persons an assignment for the sum or sums so assessed as damages aforesaid.

Act 1898, Ch. 123; 1912, Ch. 32.

Section 175. Whenever the Mayor and City Council shall hereafter by ordinance direct the Commissioners for Opening Streets to lay out, open, extend, widen, straighten, grade or close up, in whole or in part, any street, square, lane or alley, within the bounds of this city, the said Commissioners, having given the notice required by law of their first meeting to execute the same, shall meet at the time and place mentioned in said notice, and from time to time thereafter, as may be necessary, to exercise the powers and perform the duties required of them by said ordinance, and shall ascertain whether any and what amount of value in damage will be caused to the owner of any right or interest in any ground or improvements within or adjacent to the City of Baltimore by such opening, extending, widening, straightening or closing for which, taking into consideration all advantages and disadvantages, such owner ought to be compensated; and the said Commissioners having ascertained the whole amount of damages for which compensation ought to be awarded, as aforesaid, and having added thereto an estimate of the probable amount of expenses which will be incurred by them in the performance of the duties required of them as aforesaid; in which they may include a sum sufficient in their judgment to cover the expenses and contingencies of litigation, and administration expenses; shall proceed to assess all the ground and improvements within and adjacent to the city, the owners of which, as such, the said Commissioners shall decide and deem to be directly benefited by accomplishing the object authorized in the ordinance aforesaid; and should the direct benefits, assessed as aforesaid, not be equal to the damages and expenses incurred, the balance of said expenses and damages shall be paid by the City Register, and provided for in the general levy, or out of funds derived from loans, if properly applicable thereto.

Act 1898, Ch. 123; 1900, Ch. 109.

Section 176. In every case where it shall be necessary in order to effect the object proposed under any of the ordinances providing for the laying out, opening, widening or straightening in whole or in part any street, square, lane or alley, that a portion only of a lot or of a lot and improvements shall be taken and used or destroyed, and the owner or owners thereof shall claim to be compensated for the whole, the said Commissioners in such cases may, if they deem it best, and not otherwise, accept a surrender in writing of the whole of said lot and improvements, or the whole of said improvements, from said owner or owners, in which event the said Commissioners shall ascertain the full value thereof, as if the whole lot or lots and improvement or improvements, as the case may be, were necessary to be taken and used for such proposed object, and the whole amount of such valuation when finally decided on shall be paid or tendered to the said owner or owners before any part thereof shall be destroyed, removed or used, unless such owner or owners shall assent thereto in writing, as now provided for by law; and the said Commissioners, after giving ten days' notice in two of the daily newspapers of the city of the time, place, manner and terms of sale, shall sell by public auction to the highest bidder the materials of any house or houses which it shall be necessary to remove, in whole or in part, and also the residue of any lot of which a part shall be taken and used to effect the object confided to the Commissioners, and which residue shall have been, with the consent of the Commissioners aforesaid, surrendered by the owners thereof as aforesaid; the purchase money to be paid when full possession shall be given of the property or material so sold, and the said Commissioners or a majority of them on receiving the purchase money aforesaid, and not before, shall by a good and sufficient deed convey the lot or lots of ground by them so sold to the purchaser; but no such sales shall be made until after the Commissioners have assessed the entire amount of damages and expenses as are now directed to be assessed by existing ordinances relating to the condemnation of streets, nor until all damages for taking said property shall have been paid or tendered to the proper party or parties or invested or paid into Court as by law required, nor until the said Commissioners are ready and able to give possession to the said purchaser or purchasers of property and materials aforesaid, and the said Commissioners are duly empowered to take and receive a good and sufficient bond from the purchaser or purchasers aforesaid, with a penalty to the Mayor and City Council of Baltimore, conditioned that the purchase money be duly paid at such time as the said Commissioners shall demand the same, and conditioned further that said purchaser or purchasers shall remove within sixty days after notice from the said Commissioners, from the bed of the street all such materials so sold, and all rubbish or other obstructions in said street occasioned thereby; and in the event of the purchaser or purchasers not complying with the terms of said sale, the Commissioners shall resell the said lot or lots and improvement or improvements, as the case may be, at the risk of the former purchaser, or purchasers, giving not less than five days' notice of said resale in two of the daily newspapers of the city aforesaid; provided, however, that where, in the judgment of said Commissioners, a part only of the whole of a lot or a part of the whole of the improvements of any lot can be taken without destroying the whole of said lot or said improvements, for the purpose for which lot or improvements are used, or for building purposes, the said Commissioners shall only condemn such part of said whole lot or improvements as is necessary for the proposed object, and shall award to the owner or owners of the part of the lot or improvements so taken such damages and assess upon the remainder thereof such benefits as in their judgment shall be right and proper; and provided, further, that in all cases where there are sheds or other obstructions lying and being in beds of streets, lanes, roads or alleys, in process of opening or widening, where the same will not, in the judgment of the Commissioners for Opening Streets, sell by public auction for the amount of the expenses of said sale, then the said Commissioners for Opening Streets may, and they are hereby authorized, to sell the same at private sale.

Act 1898, Ch. 123; 1912, Ch. 32.

Section 177. As soon as the Commissioners aforesaid shall have completed the valuation of damages to be ascertained by them as directed by this article, they shall cause a statement thereof to be made out for the inspection of all persons desiring information of its contents, and such statement, together with an explanatory map or maps, shall contain a description of each separate lot or parcel of ground deemed to have sustained damages, its dimensions, the name of the street, lane or alley on which it bounds, the names of all persons supposed to have any estate or interest in it, and the amount of damages as value by the Commissioners; and if there be any house or other improvements on it, necessary to be removed, in whole or in part, such description thereof as the Commissioners shall deem necessary; and in like manner a description of each parcel of ground deemed by the Commissioners to be benefited, the name or names of such person or persons as may be supposed to have any estate or interest therein, and the amount assessed thereon for benefits; and the said Commissioners shall cause a notice to be published for four successive days in two daily newspapers of the city stating the extent of the ground covered by the assessment, and that such statement and maps are ready for the inspection of all persons interested therein and that the Commissioners will meet at their office on a day named in said notice, which shall be not less than five nor more than ten days after the first publication of such notice, for the purpose of reviewing any of the matters contained in such statement to which any person claiming to be interested shall make objection; and the Commissioners shall meet at the time and place so appointed, and shall hear and consider all such representations or testimony on oath or affirmation, verbal or in writing, in relation to any matter in said statement which shall be offered to them on behalf of any person claiming to be interested therein, and the said Commissioners shall make all such corrections and alterations in the valuations, assessments and estimates, and all other matters contained in the said statements and explanatory map or maps aforesaid, as in their judgment shall appear to them, or a majority of them, to be just and proper; and they may adjourn, from day to day, if necessary, to give all parties claiming a review an opportunity to be heard, not exceeding in the whole ten days; and after closing such review the Commissioners shall make all such corrections in their statement and explanatory map or maps as they shall deem proper, and cause such statement as corrected to be recorded in their book of proceedings, and certified under the hands and seals of said Commissioners and their clerk, and notify all persons interested by an advertisement, to be inserted once a week for four successive weeks, in two of the daily newspapers of the city that the said assessments have been completed, and that the parties affected thereby are entitled to appeal therefrom by petition in writing to the Baltimore City Court within thirty days after the first publication of said notice.

Act 1898, Ch. 123; 1912, Ch. 32.

Section 178. It shall be the duty of the clerk of the Commissioners for Opening Streets to serve written or printed notices upon each and every party or parties assessed for damages, caused by the condemnation and opening of any public highway; provided, however, that the service of such notices shall not be so construed as to be one of the prerequisites to the condemnation and opening of any street under any ordinance heretofore passed, or hereafter to be passed.

Act 1898, Ch. 123; 1912, Ch. 32.

Section 179. The Mayor and City Council of Baltimore or any person or persons, or corporations, who may be dissatisfied with the assessment of damages or benefits, as hereinbefore provided, may, within thirty days after the first publication of the notice provided in Section 177, appeal by petition, in writing, to the Baltimore City Court, praying the said Court to review the same, and on any such appeal the Court shall appoint a day for hearing said appeal, which shall not be less than five nor more than thirty days after the expiration of the thirty days limited for taking appeals as aforesaid, and shall direct the Clerk of the said Court to issue a subpoena *duces tecum* to the clerk of the Commissioners for Opening Streets, requiring him to produce and deliver to said Court the record of the proceedings of the said Commissioners in the case, and all maps, plats, documents and papers connected with such record, and the said City Court shall have full power to hear and fully examine the subject, and decide on the said appeal, and for that purpose is hereby authorized and empowered to adjourn from time to time, and may cause all such appeals to be consolidated, or may hear and decide them separately, and may require the said Commissioners, their clerk, surveyor, or other agents and servants, or any of them, and all such other persons as the Court shall deem necessary, to attend, and examine them on oath or affirmation, and may permit and require all such explanations, amendments and additions to be made to and of the said record of the proceedings as the said Court shall deem requisite; and the persons appealing to the Baltimore City Court, as aforesaid, shall be secured in the right of a jury trial, and the said Court shall direct the Sheriff of Baltimore City to summon twelve or more persons qualified to be jurors, and shall impanel any twelve disinterested persons so summoned, or attending Court, to try any question of facts, and if necessary to view any property in the city, or adjacent thereto, to ascertain and decide on the amount of damages or benefits, under the direction of the Court; and the said Court shall not reject or set aside the record of the proceedings of the said Commissioners for any defect or omission in either form or substance, but shall amend or supply all such defects and omissions and increase or reduce the amount of damages and benfits assessed, and alter, modify and correct the said return of proceedings, in all or any of its parts, as the said Court shall deem just and proper, and shall cause the proceedings and decisions on said returns and appeals to be entered in the books containing the record of the proceedings of the Commissioners, certified by the clerk, under the seal of the Court, and the book to be transmitted to the said Commissioners, which shall be final and conclusive in every respect, unless an appeal be taken to the Court of Appeals, and such record book, or a copy of the proceedings therein, or any part of such proceedings, whether in Court or out of Court, certified by the said Commissioners under their hands, shall be evidence in any Court in this State, and the Judge of the Baltimore City Court shall have full power, in his discretion, to add the reasonable costs of any appeal, to be taxed by him, or any part thereof, to the damages to be collected for opening or closing said street or to require such cost, or any part thereof, to be paid by all or by either of the appellants, as the circumstances of such appeal, in his opinion, shall justify. Upon every appeal to the Baltimore City Court from any action of the Commissioners for Opening Streets both the damages and benefits assessed by the Commissioners to the appellant shall be open for review and correction by the said City Court.

Act 1898, Ch. 123; 1912, Ch. 32.

Section 180. Whenever any ordinance passed by the Mayor and City Council of Baltimore, providing for the condemnation and opening, extending, widening, grading or closing of any street, lane or alley in said city shall be set aside, or declared null and void by a Court of competent jurisdiction, to wit: the Baltimore City Court or the Court of Appeals, in the event of an appeal to that tribunal, or the same shall be repealed by the city, it shall be the duty of the Comptroller immediately thereafter to draw his warrant on the City Register in favor of any and all persons or their legal representatives, who may have paid into the city treasury any sum or sums of money on account thereof; which shall be forthwith paid out of any sums in the treasury not otherwise appropriated. The Comptroller shall likewise draw his warrant on the City Register for the payment of all expenses which may have been incurred by virtue of any such ordinance in carrying out the provisions thereof, for which the city may be liable under existing ordinances.

Act 1898, Ch. 123; 1912, Ch. 32.

Section 181. If no appeal shall have been prayed, then within ten days after the time hereinbefore limited therefor, or after the return of the decision upon any appeal shall have been made to the said Commissioners, their return shall be transferred to the City Collector, who shall proceed forthwith to notify the parties assessed for benefits by means of bills specifying the several sums so assessed, and warning them that if the same be not paid within two months from the date of such transfer of said Commissioners' returns, he will proceed to sell the specific pieces or parts of property on which said unpaid sum or sums of money shall have been assessed, in the manner, and after having given the notice directed by this article.

Act 1898, Ch. 123; 1912, Ch. 32.

Section 182. If the sums assessed upon the property specified shall not be paid within the time above limited, the City Collector is hereby directed to sell the property, or any part thereof, on which such assessment has been laid, giving thirty days' notice of said sale in two of the daily newspapers published in the City of Baltimore, the first insertion of said notice to be made in said newspapers promptly after the expiration of the time limited in this article for the payment of said benefits; and the moneys so collected by the City Collector shall be paid over by him to the city as other moneys are directed to be paid over.

Act 1898, Ch. 123; 1912, Ch. 32.

Section 183. In all cases in which the City Collector shall sell any property on account of the non-payment of assessments made for the opening, closing, widening, grading or extension of any street, lane or alley, it shall be his duty to sell said property to the extent and subject to the same conditons which are provided by ordinance for the sale of real estate in the City of Baltimore, charged with the payment of other taxes imposed by this corporation; and in the event of the purchaser or purchasers failing forthwith to comply with the terms of said sale, the City Collector shall resell the same at the risk of the former purchaser, giving not less than ten days' notice in two of the daily newspapers of the city aforesaid; and after collecting the benefit assessments he shall forthwith return the said Commissioners' proceedings to the Comptroller.

Section 184. The City Collector, on receiving the full amount of the purchase money on such sale, shall execute a deed of conveyance in favor of the purchaser or purchasers, or their assign or assigns, which deed shall convey a fee simple or leasehold estate, as the case may be, in and to such property, and after deducting the costs of sales, advertising and other necessary expenses, he shall pay the balance of such purchase money to the city, which shall pay over the said balance, after deducting the amount assessed on said property, to the person or persons entitled thereto, on demand without interest.

Section 185. All sums of money assessed by the Commissioners aforesaid, upon property deemed by them to be benefited, shall be and continue liens on each several piece of property so assessed, to the amount of its particular assessment, until the same shall be paid to the city; but no part of any street, square, lane or alley shall be opened on or over the ground of any person or persons, or corporation, adjudged by the Commissioners to be entitled to damages for said opening, without the consent, in writing, of the person or corporation so entitled, until such damages shall be paid, or the amount thereof invested in the city stock, for the use of each person or corporation entitled to any part of the compensation for such damages, to the amount of his, her or their respective right and interest therein, of which investment the City Register's certificate, under the corporate seal of the city, shall be competent proof.

Section 186. Any person or persons not claiming title to any lot or piece of property upon which any sums shall be assessed, as aforesaid, may pay the amount of the sum so assessed, within the time limited, to the City Register, and obtain his certificate of having paid such sum without claiming title to the property; and such payment shall vest in the person or persons paying his, her or their heirs, the lien on such lot or property mentioned in this article.

Section 187. If it should so happen that any one or more of said Commissioners should be interested in any particular case, the Mayor shall make a temporary appointment of a Commissioner or Commissioners, to act in the place and stead of such interested Commissioner or Commissioners, who shall take the oath or affirmation, as the case may be, and in all respects conduct himself and have all the powers as the other Commissioners who are appointed by the Mayor.

Section 188. Whenever any lot, or part of a lot, or parcel of ground may be taken and included within the lines of any street, lane or alley, or part thereof, and damages assessed therefor, and there shall be an outstanding unexpired term of years therein, the said Commissioners shall discriminate in their proceedings between the value of fee simple or ground rent interest, and the leasehold interest.

Act 1898, Ch. 123; 1912, Ch. 32.

Section 189. Whenever any obstruction shall have remained in any street, lane or alley, or part thereof so opened, for the space of sixty days after the proceedings of the said Commissioners shall have been completed, it shall be the duty of said Commissioners to cause the same to be removed and to draw on the Register for the expense so incurred, which shall be paid by him, and the Mayor shall forthwith cause a suit for the recovery of said expenses to be instituted against the person or persons by whose default the said obstruction has been suffered to remain, and the same, when recovered, shall be paid to the Register for the use of the city.

Section 190. (Repealed, Act 1912, Ch. 32.)

Act 1898, Ch. 123; 1912, Ch. 32.

Section 191. When the proceedings of the Commissioners for Opening Streets in any case are transferred to the City Collector, the City Register is authorized and required to pay all the expenses incurred by the Commissioners under the said proceedings. But such expenses shall not remain unpaid more than six months after the completion of any services performed under said ordinance; and the Comptroller and Register are directed to pay, within six months after the services have been completed, any such expenses upon presentation of the proper vouchers or certificates from the Commissioners for Opening Streets.

Section 192. (Repealed, Act 1912, Ch. 32.)

Section 193. Whenever the owner or owners of the bed of any of the streets, lanes or alleys of the city, as laid out on Poppleton's Plat, or on such plat as the city may adopt, for the territory annexed under the Act of 1888, Chapter 98, shall offer to convey the same to the city, it shall be the duty of the Mayor to obtain the opinion of the City Solicitor in relation to the title to the property and the legality of the deed or deeds, and, if in the opinion of the Mayor, it will be right and proper, and the public good will result therefrom, he is hereby authorized to receive, in the name of the Mayor and City Council of Baltimore, any deed or deeds so offered to the city; provided, that no deed shall be for less than one whole square, and that the city shall not incur any expense in receiving the same; and that a plat setting forth the location, together with the surrounding property, to the extent of two hundred feet, shall accompany said deed.

Section 194. Whenever any street, lane or alley, or part thereof, shall be conveyed to the city, as provided in the preceding section, the same shall be a public highway, subject to all ordinances and resolutions relating to streets, lanes and alleys in the City of Baltimore.

Section 195. The Mayor and City Council of Baltimore will not entertain any petition or remonstrance against the opening, widening, straightening or closing of any street, lane, or alley in the City of Baltimore, unless the signers of such petition or remonstrance shall state the location of the property they represent, together with the number of front feet of the same.

Act 1898, Ch. 123; 1906, Ch. 25.

Section 827. Whenever any property shall have been condemned in any form of proceeding for the use of the Mayor and City Council of Baltimore, and in consequence of infancy, insanity or absence from the city of any person or persons entitled to receive any money awarded in any such proceedings, conflicting claims, refusal to accept, or any other cause, such money can not be safely and reasonably paid to any person or persons, it shall be lawful for the Mayor and City Council of Baltimore to file a bill or petition in any court of equity in the city or county where the property is condemned, or any portion thereof lies, and whenever such court shall be satisfied that, for any of the reasons aforesaid, that said Mayor and City Council of Baltimore should be permitted to pay the said money into such court, it shall pass such decree as it shall deem proper, and the payment of any money into court under any such decree or order shall be considered in all respects equivalent to a tender thereof to any person or persons entitled to such money, and who may be made a party or parties to such proceeding, and upon making such payment, the Mayor and City Council of Baltimore shall be thereby released from all further liability for the money awarded as aforesaid to any person or persons who may be made a party or parties to such proceeding as aforesaid; and in all cases when one or more persons is or are entitled to an estate for life or years, or an estate tail, fee simple, conditional, base or qualified fee, or any other particular, limited or conditional estate in property condemned as aforesaid, and any person or persons is or are entitled to a remainder or remainders, vested or contingent, or an executory devise or devises, or any other interest, vested or contingent, in the same property, if all persons in being who would be entitled to the said property if the contingency had happened at the date of the filing of the aforesaid bill or petition, shall be made parties to such proceeding, the payment into court of the money awarded for such property shall bind all persons, whether in being or not, who claim or may claim any interest in the said property under any of the parties to the said cause, or under any person from whom any of the parties thereto claim or from or under or by the original deed or will by which such particular, limited or conditional estates with remainders or executory devises were created, and the said Mayor and City Council of Baltimore shall, upon making such payment, be thereby released from all further liability for the money awarded as aforesaid.

Act 1898, Ch. 123; 1912, Ch. 32.

Section 828. Before they shall pass any ordinance under Section 6 of this article, paragraph, "Streets, Bridges and Highways" relating to the laying out, opening, extending, widening, straightening, or closing up, in whole or in part, of any street, square, lane or alley within Baltimore city, notice shall be given by advertisement published twice a week for two consecutive weeks, in two of the daily newspapers in the said city, that application shall be made for the passage of such ordinance, which notice shall set forth clearly, in the case of laying out, opening or extending any street, square, lane or alley, the length or width of such street, square, lane or alley, or part thereof to be laid out, opened or extended, and, in the case of widening or straightening shall set forth clearly both the present and the intended width, and also the length of any street, lane or alley or part thereof intended to be widened or straightened, and in case of closing shall set forth clearly the length and width of the street, lane or alley, or any part thereof, intended to be closed; and notice shall also be given by filing, in the office of the Commissioners for Opening Streets, on or before the first day of such publication, a map on the scale, not smaller than fifty feet to the inch, prepared by some competent surveyor, whose name shall be signed to the same, which, in case of laying out, opening, extending, widening or straightening, shall show the course and the lines of the projected improvement, and also the lots and buildings thereon which shall be taken or destroyed, in whole or in part, and which, in the case of closing, shall show the street, lane, or alley, or part thereof, intended to be closed, and also the abutting lots and improvements thereon. It shall be the duty of the Commissioners to endorse on said map their names, with the date of it being filed in their office, and to keep the said map where the public may have access to it, whenever said map may be needed for the purpose of being shown at any meeting of the City Council, or of any committee thereof, they may, on the written order or request of the President of either Branch of the City Council, or of the chairman of such committee, and, on obtaining his receipt therefor, allow the said map to be taken from their office for that purpose, to be returned on the following day. At any time before the final passage of said ordinance, said map and said ordinance may be amended, provided such amendment shall not substantially depart from the published notice, so as to substantially affect parties who would not be warned by such notice.

Act 1898, Ch. 123; 1912, Ch. 32.

Section 829. Before any Commissioners appointed by any ordinance of said corporation, under the two preceding sections, shall proceed to the performance of their duty, they shall give notice in at least two of the daily newspapers in the City of Baltimore of the object of the ordinance under which they propose to act, at least ten days before the time of their first meeting to execute the same.

Section 830. A tenant for ninety-nine years, or for ninety-nine years, renewable forever, or the executor or administrator of such tenant, or the guardian of an infant owner, or a mortgagee in possession, shall be deemed and taken as an owner for the purposes of any application to the Mayor and City Council authorized by this sub-division of this article; and the application of any such person shall bind the property so represented for any assessment or tax made under an ordinance passed in pursuance of the provisions of this sub-division of this article.

Section 831. Where real estate within the said city has been or may be divided according to law among heirs, legatees, joint tenants or tenants in common, entitled to the same, and such division calls for any of the streets, lanes or alleys, or any part thereof surveyed and laid off under the Act of 1817, Chapter 148, or reserves any of the streets, lanes or alleys, or any part thereof, as open, and divides such estate with reference thereto, the Mayor and City Council of Baltimore may, on application of one or more persons interested in the ground to be taken on such application, adopt and sanction by ordinance the principle under which such division was had, and open any of the said streets, lanes or alleys, or any parts thereof, in the said division reserved or recognized; provided, at least one week's notice in the newspapers of said city (the cost of the advertisement to be paid by the applicants), be given of such application before any such ordinance shall pass.

Section 832. All the streets, lanes or alleys opened in the manner directed in the preceding section shall be public highways, and be subject to the laws, regulations and ordinances applicable to public streets, lanes or alleys, or parts thereof, in said city.

Section 2. And be it further enacted, That this Act shall take effect from the date of its passage, but nothing herein contained shall be construed to affect any right or liability of any party accrued, or any proceedings begun, or pending, prior to the passage of this Act, but all such rights shall remain and such proceedings shall continue, in the same manner, and to be of the same effect, as if the provisions herein above mentioned had remained as they were prior to the passage of this Act. Approved March 14, 1912.

Acts 1898, Ch. 123; 1902, Ch. 453; 1904, Ch. 433; 1906, Ch. 158.

Section 840. No avenues, streets or alleys within the territory annexed to the City of Baltimore by the Act of 1888, Chapter 98, shall hereafter be opened, established or condemned, nor shall the dedication of any avenue, street or alley in said territory be hereafter accepted by the Mayor and City Council of Baltimore unless the same shall be approved in writing by the Topographical Survey Commission, consisting of the Mayor, Comptroller and Register of the City of Baltimore, or unless the said avenues, streets or alleys be so opened, established, condemned or dedicated that the lines and grades thereof shall conform to the general plan of streets for the annex as adopted under Ordinance No. 129, approved December 3, 1898, or as said plan shall be amended in accordance with the provisions of this section—that is to say, with the approval of the aforesaid Topographical Survey Commission—the Mayor and City Council of Baltimore may by ordinance, from time to time and in any manner, alter or amend the said general plan of streets, and the said Mayor and City Council of Baltimore may thereafter by ordinance open, establish or condemn, or the Mayor of Baltimore city may receive a deed for any avenue, street or alley laid down on the said general plan of streets as amended; or if any such avenue, street or alley shall be dedicated, the same may thereafter be accepted; said Topographical Survey Commission is hereby authorized to make such rules and regulations regarding surveys, plats or plans relating to the location of avenues, streets or alleys as they may deem proper from time to time.

Note—Changes in the law effected by the Act of 1912, Chapter 32, take effect from the date of the passage of said Act, to wit: March 14, 1912. Vide said Section 2:

ANNEX IMPROVEMENT COMMISSION.

Acts 1910, Ch. 736; folio 607, etc.

An Act to authorize and empower the Mayor and City Council of Baltimore to issue its stock to an amount not exceeding two million five hundred thousand ($2,500,000) dollars, for the purpose of defraying the costs and expenses of condemning, laying out, opening, extending, widening, straightening, closing, grading, paving and curbing any street, avenue, lane or alley or part thereof, in the annex portion of said city, and for establishing the building lines and the width of the sidewalks on any street, avenue, lane or alley or part thereof in said annex portion of the city; to authorize the submission of an ordinance to that end to the legal voters of the City of Baltimore to constitute the Commissioners for Opening Streets a Commission to carry out said work and defining the powers and duties and the procedure of such Commission, and providing also for the improvement of the sidewalks in said annex portion of the city at the expense of the property owners and for grading, paving and curbing such streets, avenues, lanes and alleys in whole or in part at the expense of the adjacent property upon the request of the owners of a majority of the front feet thereof.

SECTION 1. Be it enacted by the General Assembly of Maryland, That the Commissioners for Opening Streets of the City of Baltimore are hereby constituted a Commission to be known as the Annex Improvement Commission, and as such in addition to their ordinary duties are hereby vested and clothed with all the powers and rights in this Act contained, and are hereby authorized, empowered and directed to carry into effect all the provisions of this Act. As compensation for their services hereunder the Mayor and City Council of Baltimore may in its discretion award the said Commissioners such annual sum as it may deem proper in addition to the compensation to which they are respectively entitled for discharging the ordinary duties of their office, provided that the total compensation received by each of said Commissioners shall in no event exceed the sum of two thousand five hundred ($2,500) dollars per annum. The clerk of said Commissioners shall act as their secretary in connection with the powers and duties hereby conferred, and for his services in this connection, the Mayor and City Council of Baltimore may, in its discretion, award him such annual sum as it may deem proper, in addition to the compensation to which he is entitled for discharging the ordinary duties of his office as clerk; provided that his total compensation shall in no event exceed the sum of two thousand ($2,000) dollars per annum.

The said secretary shall keep a record of all proceedings of the Commission, and shall enter in a well-bound book and carefully preserved, neat, legible and accurate minutes of all meetings of the Commission, and he shall perform all such other duties as usually appertain to the office of secretary of a private corporation, or as may be imposed upon him by this Act or as may be assigned to him by the Commission, shall annually make to the Mayor a detailed report of all its official transactions and expenditures. The said Commission shall have authority and power, subject to the approval or ratification of the Board of Estimates, to employ any help or assistance necessary to promote the object and purpose of this Commission and its work, and to fix the compensation of such help and to remove or discharge them at their pleasure; also to purchase necessary office furniture and stationery.

SEC. 2. And be it further enacted, That upon the completion by the Annex Improvement Commission created by Chapter 274 of the Acts of the General Assembly of Maryland or of 1904 (the power and functions of which Commission have been and are being exercised by the Commissioners for Opening Streets pursuant to Ordinance No. 216, of the Mayor and City Council of Baltimore, approved March 6, 1905) of all its work pending at the time of the approval by the people of the loan hereby authorized, the said Commission shall be taken to have been superseded in every respect by the Commission hereby created, shall thereupon be entitled to the possession and custody of all maps, plats, blue-prints, sketches, surveys, books, papers, documents, writings, letters and chattels of and belonging to said former Commission, and also to any unexpended balance remaining out of the proceeds of the said loan authorized by the said Act of 1904, which unexpended balance, if any, shall be placed to the credit of the special fund hereinafter provided for and used by the Commission created by this Act in the manner authorized by this Act, for carrying out any of the powers and duties hereby conferred.

SEC. 3. And be it enacted, That said Commission shall have the right and power and under and in pursuance of any general or special ordinance or ordinances of the Mayor and City Council of Baltimore which may be passed therefor to grade and pave any street, avenue, lane or alley or any part thereof from curb to curb, and to establish and fix the building line and the width of the sidewalk on any street, avenue, lane or alley now existing or to be laid out, opened, extended, widened, straightened, grade or pave in the annex portion of the City of Baltimore. "That said Commission shall have all powers necessary and proper in the exercise of said powers; and the Mayor and City

Council of Baltimore are hereby authorized and empowered to grant by ordinance any further powers and duties it shall deem necessary for the proper execution of the improvements intended to be made by this Act."

SEC. 4. And be it enacted, That all work done on supplies or materials purchased in carrying out the purposes of this Act, when involving an expenditure of five hundred ($500) dollars or more, shall be by contract awarded by the Board afterwards to the lowest responsible bidder, in accordance with the provisions of Sections 14 and 15 of Article 4, entitled "City of Baltimore," of the Public Local Laws of Maryland, including the powers conferred by said Section 15 upon the Board of Awards to select the particular thing to be adopted in the cast of alternative bids; provided, however, that the Mayor and City Council shall have the power to prescribe by ordinance as to any particular street or streets that the contract for paving or curbing, repaving or recurbing the same shall be awarded to the lowest responsible bidder complying with the call for bids, whether bids are asked for for one or more than one kind of pavement, reserving to the Board of Awards the right to reject all bids and to call for new bids.

SEC. 5. And be it further enacted, That the said Commission hereby created shall be the agent of the Mayor and City Council of Baltimore to acquire by gift, purchase, lease, whatever the duration of the lease, or other methods of acquisition, or by condemnation, any private property whatsoever, including streets, avenues, lanes and alleys, right or interests, franchises, privileges or easements, that may be required to open, widen, extend, straighten, close, grade or pave any street, avenue, lane or alley, or to broaden any sidewalk, and as soon as the title of the property acquired as set forth herein has been certified by the City Solicitor, said Commission shall have the same conveyed to the Mayor and City Council of Baltimore, and no ordinance shall be requisite to the validity of such conveyance; said streets, avenues, lanes and alleys so conveyed shall become public highways, subject to all ordinances and resolutions relating to streets, avenues, lanes and alleys in the City of Baltimore; that authority is hereby conferred upon the Mayor and City Council of Baltimore to provide by ordinance or ordinances the proceeding for condemnation of property as herein set forth by the said Commission.

SEC. 6. And be it further enacted, That no expenditure shall be made by said Commission for the grading, paving or improvement of said sidewalks in the annex portion of said city, but the same shall be done at the expense of the owner or owners of the property upon and along the streets, avenues, lanes or alleys on which such sidewalks are to be established, widened, graded, paved or otherwise laid out and improved; and the said Commission in its discretion is authorized and empowered to require said property owners to grade, pave and improve said sidewalks at their expense, or upon their failure to do so the Commission may do such work itself and assess said property for the cost and expenses of such work, and the procedure and rights and powers of the Commission with respect to such work and to such assessments and the collection thereof shall be that now or hereafter prescribed by law in relation to the duties of a similar nature with which the City Engineer and other officers of the city are now or may be respectively clothed, or the procedure and the rights and powers of said Commission may be such as may be provided for the very purpose by any lawful ordinance or ordinances of the Mayor and City Council of Baltimore, which said ordinance or ordinances the Mayor and City Council of Baltimore is hereby fully authorized to adopt, provided provision is made in such ordinance or ordinances for reasonable notice to the owner or owners and for appeals to the Baltimore City Court, and the right of appeal to the Court of Appeals by any person interested, including the Mayor and City Council of Baltimore.

SEC. 7. And be it further enacted, That the Mayor and City Council of Baltimore be and are hereby authorized to issue stock to an amount not exceeding two million five hundred thousand dollars, to be issued from time to time and payable at such time and bearing such rate of interest as the said Mayor and City Council of Baltimore shall by ordinance prescribe; provided, however, that not more than five hundred thousand dollars of said stock shall be issued in any one year. The proceeds of the sale of said stock shall be used only for the purpose of providing the costs and expenses of condemnation, opening, grading, paving and curbing the streets, avenues, lanes and alleys of the annex portion of Baltimore city; said stock shall be sold and issued by the Commissioners of Finance of the City of Baltimore at the best prices obtainable in their judgment therefor, and any premiums derived from the sale thereof shall remain in their hands as part of the sinking funds hereinafter mentioned for the redemption of said stocks at maturity. The residue of the money received from the sale of said stock shall be turned over by them to the Comptroller to be by him deposited with the City Register, and to be placed to the credit of a special fund, to be known as the "Annex Improvement Fund," which shall be exclusively applicable to the purposes in the section above specified, and shall be chargeable with no other items of cost or expense whatever; provided, however, that not more than five hundred thousand dollars ($500,000) of said stock shall be issued for any one year after appropriations for the cost of said work shall have been duly included and allowed for each year in the usual way in the Ordinance of Estimates, then, upon the written requisition of the Commission or its president, the Comptroller shall draw his warrant upon the City Register, payable out of such appropriations from said special fund for the amount of all items of cost or expense properly chargeable upon said special fund; but said stock shall not be issued in whole or in part unless the ordinance of the Mayor and City Council of Baltimore providing for the issuance thereof shall be submitted to the legal voters of the City of Baltimore at such time and place as may be fixed by said ordinance, and be approved by a majority of the votes cast at such time and place as required by Section 7 of Article XI of the Constitution of Maryland. If issued pursuant to such approval, the Mayor and City Council of Baltimore shall levy in each and every year upon all property liable to taxation in the City of Baltimore a sum sufficient to pay the interest accruing on said stock and create a sinking fund sufficient, with the aid of any premiums on the sale thereof, to redeem said stock at its maturity.

SEC. 8. And be it further enacted, That while the work authorized by this Act is being done by said Commission no rights or powers now or hereafter possessed by the Mayor and City Council of Baltimore, or any department, sub-department or official thereof, shall be abrogated, abridged or in anywise altered by the provisions hereof, except in so far as the exercise of the same in the annex portion of the city may be inconsistent with the provisions of this Act; and said Commission is hereby authorized, as its work progresses, to turn over from time to time, in its discretion, such complete portion of said work as it may see fit to the proper city officials, including themselves in their ordinary capacity as Commissioners for Opening Streets, and upon determination of said work to turn over records, writings, maps, surveys, reports and papers, and all property and effects in their possession to themselves in their ordinary capacity as Commissioners for Opening Streets, to be by them preserved, used or disposed of as may be lawful and proper. The Mayor and City Council of Baltimore shall prescribe by ordinance the methods and proceedings for the sewerage and drainage of said Annex, and to provide the costs and expenses of the same out of any fund, or funds, now or hereafter available for that purpose.

SEC. 9. And be it further enacted, That Ordinance No. 151 of the Mayor and City Council of Baltimore, approved June 15, 1906, entitled "An Ordinance granting the Commissioners for Opening Streets further powers and duties in the matter of grading, paving and curbing streets, avenues, lanes and alleys or parts thereof in the annex, in addition to the powers and duties expressly conferred and imposed upon them by the provisions of Chapter 274, of the Acts of the General Assembly of Maryland for the year 1904," and Ordinance 216 of the Mayor and City Council of Baltimore, approved March 6, 1905, is hereby continued with like force and effect as if the same had been ordained after the passage of this Act, and after approval by the people of the loan hereby authorized and the right and powers by said ordinance conferred and the provisions thereof and the procedure therein prescribed may be availed of by the Commission hereby created to the same extent as if said Commission were expressly named in said ordinance, but said ordinance shall be subject to repeal, modification or amendment by the Mayor and City Council of Baltimore as other municipal ordinances.

SEC. 10. And be it further enacted, That any and all moneys collected for benefits pursuant to the exercise of any of the powers hereby granted shall be placed to the credit of the special fund herein provided for, and may be appropriated and expended for the purpose of this Act.

SEC. 11. And be it further enacted, That this Act shall take effect from date of passage, and that all Acts or parts of Acts inconsistent with this Act be and the same are hereby repealed.

Approved April 11, 1910.

CHIEF ENGINEER'S REPORT

BALTIMORE, December 31, 1913.

To the Honorable the Commissioners for Opening Streets.

GENTLEMEN:

I beg to submit to you herewith a report of the grading and paving work done by your Commission during the year 1913.

At the end of 1912 the following streets were under contract, but not paved:

Bentalou street, from North avenue to Presbury street.
Berry street, from Elm to Chestnut avenues.
Calvert street, from North avenue to Twentieth street.
Chester street, from North avenue to Clifton Park.
Fortieth street, from Chestnut to Roland avenues.
Malakoff street, from Washington to Chester streets.
Mason alley, from Ducatel to Whitelock streets.
Newington avenue, from Park to Mount Royal avenues.
Oak street, from Twenty-sixth to Twenty-seventh streets.
Twentieth street, from Kennedy avenue to Aisquith street.
Twenty-sixth street, from Calvert street to Guilford avenue.
Twenty-seventh street, from Calvert street to Guilford avenue.
Twenty-eighth street, from Huntingdon to Hampden avenues.
Twenty-ninth street, from Huntingdon to Hampden avenues.
Thirty-fourth street, from Chestnut to Elm avenues.

All of these streets have been completed and accepted.

Concerning the contracts that have been let during 1913, I beg to report the following:

Contract No. 106, which included the paving of Westwood avenue with bituminous concrete, from Poplar Grove street to Hilton street, was awarded to P. Flanigan & Sons. Work was started June 16, 1913. There is a fill of some 14,000 yards in Westwood avenue, between Poplar Grove street and Longwood street. After our fill was completed we had to postpone the actual paving until the Sewerage Commission completed its storm-water drain, which was planned to run in the bed of Westwood avenue, between Poplar Grove and Longwood streets. This drain is nearly completed now, and we will be able to proceed with our paving at the opening of spring weather. The paving of the avenue, from Longwood street to Hilton street, has been completed and accepted.

Contract No. 107 was awarded to P. Flanigan & Sons, April 23, and work was started May 17. It included the paving of Oak street with bituminous concrete, from University Parkway to Mallory lane. The work was completed August 30, and has been accepted.

Contract No. 108, which included the paving of Smallwood street, from Walbrook avenue to Clifton avenue, and Clifton avenue, from Smallwood street to the first alley east of McKean avenue, with vitrified brick, was awarded to the Penn-Mar Construction Company, April 23. The Penn-Mar Construction Company subsequently sub-let the contract to the Baltimore Asphalt Block and Tile Company. Owing to the remarkable scarcity of good vitrified block, the Baltimore Asphalt Block and Tile Company was forced to let the paving season go by without making very much of a start on this contract. To date, about half the grading has been done, and about half the curb has been constructed. About two-thirds of the brick necessary for the completion of the contract are on the ground, and several cars of brick are arriving daily, so that as soon as the spring weather permits, this contract can be finished in a short time.

Contract No. 109 included the paving of Monroe street, from North to Clifton avenues. The bids were opened April 16, but the contract was never awarded, as your Commission decided it would be inadvisable to pave this street at that time.

Contract No. 110 included the paving of Augusta avenue, from Frederick road to Old Frederick road, with bituminous concrete, a distance of about 1,600 feet. Although this contract was awarded to the Eastern Paving Company on April 23, work was not begun until September 2, because the Sewerage Commission was unable to complete its drainage system in Augusta avenue until after September 2. The work was pushed energetically and was finished November 18, and has been accepted.

Contract No. 111 included the paving of Fayette street, from Catherine street to Shipley street; Fairmount avenue, from Catherine street to Shipley street; Catherine street, from Baltimore street to Fayette street, and Shipley street, from Baltimore street to Fayette street, with bituminous concrete. The contract was awarded to the Penn-Mar Construction Company on April 23, and was subsequently sub-let to the Baltimore Asphalt Block and Tile Company. The part of the city in which these streets are located was not in the area that the Sewerage Commission planned to sewer and drain when their 1906 estimate was made, so that the Sewerage Commission was unable to take care of the much needed drainage system in Catherine street. At our request and at our expense the Sewerage Commission constructed a drainage system in Catherine street, the storm-water flow from Fayette street, Fairmount avenue and Catherine street being conducted to Peck's Branch. The contract was finished November 26 and was accepted.

Contract No. 112 included the paving of Hilton street with sheet asphalt, from Morris avenue to Windsor avenue, and was awarded to the J. H. Cranford Construction Company, May 21, 1913. The contract was subsequently sub-let to the Baltimore Asphalt Block and Tile Company, which Company began work July 31 and completed the contract November 6 in a very satisfactory manner. The street has been accepted.

It became evident that a drainage system to take care of the drainage at the corners of Hilton street and Walbrook avenue, and at Hilton street and Windsor Mill road, was necessary. This system, which carries the storm-water flow from Hilton street to an existing drain some 300 feet west of Hilton street, was constructed by the City Engineer at our expense.

Contract No. 113 included the paving of Forest Park avenue, from Garrison avenue to the western city line, and Kathland avenue, from Oakfield avenue to the western city line, with bituminous concrete. The contract was awarded to the J. H. Cranford Construction Company, and was subsequently sub-let to the Baltimore Asphalt Block and Tile Company. The work was started September 24, was finished November 27 and has been accepted by the city. Concerning this contract, I might say that we encountered a rather embarrassing drainage proposition. A drain which took care of the storm-water flow at several points on Garrison avenue was uncovered on Forest Park avenue about 300 feet west of Garrison avenue, the outlet to the drain being under the driveway into the Kelso Home. Our grade was such that we were unable to carry this drainage in the direction in which it originally ran. We appealed to the Sewerage Commission to help us out of our difficulty by building a drain from Garrison avenue through the alley north of Springdale avenue to a large drain which they were constructing in Callaway avenue. Although their general plan showed the drainage of Garrison avenue to be taken care of by a drain running in another direction, which drain it was impossible to build at the present time, they agreed to construct the drain as requested by us, provided we would pay the difference between the cost of the drain, which we requested, and the estimated cost of the one they proposed to build at some future time. The Sewerage Commission added this drain for us as an extension to one of their contracts, and it was completed promptly and satisfactorily at a cost to us of only $143.

Contract No. 114, which included the paving, with bituminous concrete, of Cleveland avenue, from Garrison avenue to Liberty Heights avenue, and Callaway avenue, from Garrison avenue to Liberty Heights avenue, was awarded to the J. H. Cranford Construction Company, and was subsequently sub-let to the Baltimore Asphalt Block and Tile Company. Cleveland avenue was completed on October 20, but the paving of Callaway avenue had to be postponed until the spring of 1914, on account of the work which the Sewerage Commission did in Callaway avenue, and which has just been completed. The paving of Cleveland avenue has been accepted by the city.

Contract No. 115, which included the paving of Bernard street, from Twenty-sixth to Thirtieth streets with bituminous concrete, was awarded to P. Flanigan & Sons, June 11, and was completed in a satisfactory manner, August 30. It has been accepted by the city.

Contract No. 116 included the paving of Dukeland street, from North avenue to Windsor avenue, with sheet asphalt, and was awarded to the J. H. Cranford Construction Company, and was subsequently sub-let to the Baltimore Asphalt Block and Tile Company. Up until the time the Baltimore Asphalt Block and Tile Company started the grading of Dukeland street (formerly Sixth street), November 22, the street appeared on the map only. The paving of Dukeland street will open an entirely new highway, which will conform in its location to the general plan as laid out by the Topographical Survey Commission. On December 31, all of the grading between North avenue and Clifton avenue, and about half of the grading between Clifton avenue and Windsor avenue, had been completed and a large part of the necessary curb had been constructed. Our contractor has stopped work for the winter on this street, and it is in the hands of the various city departments and public service corporations for the installation of their necessary underground structures. The actual paving will be completed in the spring.

Contract No. 117 included the paving, with bituminous concrete, of Orem avenue, Edgemont avenue and Avalon avenue, all between Parkwood avenue and Evergreen Terrace. Bids on this contract were opened May 14, but the contract was not awarded, as your Commission decided that it would be inadvisable to pave these streets at that time.

Contract No. 118 calls for the grading and paving of Hilton street, between Edmondson avenue and Frederick road, the paving to be of sheet asphalt. This is probably one of the most important contracts that has been let by your Commission for several years, as the opening of Hilton street will furnish a connection between two much travelled east and west highways, which has for a long time been sadly needed. The contract for this street was awarded June 4 to Frech & Allen, and they started their work of grading June 30. At the end of the year the rough grading, amounting to 60,000 yards, was completed and the street is now in the hands of the various city departments and public service corporations for the installation of their underground structures. We anticipate that the paving of this street will be finished by the first of July, and there seems little doubt that building operations will be started along Hilton street even before the completion of the paving. Hilton street, in this part of the city, is an entirely new street, as the majority of it was used as cornfields before it was acquired by your Commission and graded.

Contract No. 119, which calls for the paving of Twenty-seventh street, between Huntingdon avenue and Sisson street, with vitrified block, was awarded to Thomas Mullan, June 11, and he began his work of grading July 2, completing the job September 27. Already Twenty-seventh street has been subjected to a great deal of heavy traffic.

Contract No. 120, which included the paving, with bituminous concrete, of Cedar avenue, from Thirty-third street to Carwell avenue; Carwell avenue, from Chestnut to Cedar avenues; Thirty-sixth street, from Chestnut to Cedar avenues; Thirty-fourth street, from Cedar to Dulin avenues, and Dulin avenue, from Thirty-third street to Thirty-fourth street, was awarded, June 18, to the Baltimore Asphalt Block and Tile Company. A careful inspection of the locality of these streets showed the necessity of installing a rather extensive drainage system. After being advised that the Sewerage Commission would be unable to do anything in the way of providing storm-water drainage in this neighborhood at any time in the near future, we took up the matter with the City Engineer, and he has recently completed for us the necessary drainage system at our expense. The paving of these streets will be pushed as rapidly as possible as soon as spring weather opens up.

Contract No. 121, which called for the paving of Guilford avenue, from Twenty-seventh to Thirty-first streets; Twenty-eighth street, from Calvert street to Guilford avenue, and Thirtieth street, from Calvert street to Guilford avenue, was awarded June 25 to the Baltimore Asphalt Block and Tile Company. The work was finished October 29, and has been accepted by the city. It is very gratifying to note that as soon as the paving of Guilford avenue was finished extensive building operations were started between Twenty-seventh and Thirty-first streets.

Contract No. 122, which is the largest contract let by your Commission during the last five years, was awarded to the American Paving and Contracting Company on October 2. The work specified by this contract includes the grading and paving of Thirty-third street, between St. Paul street and Hillen road, a distance of 7,600 feet, practically all of which is through virgin territory. The grading in this contract, which amounts to about 100,000 yards, has been well started, two steam shovels being now at work. It is our intention to complete the grading of Thirty-third street by the end of March, to turn the street over to the various city departments and public service corporations for the installation of their necessary underground structures, and to complete our paving by the first of October. The question of drainage again caused us some embarrassment when this contract was considered, as it was necessary to install a large storm-water drain to run in the alley east of St. Paul street, across our right-of-way. The Sewerage Commission had no funds with which to construct this drain, but they agreed to place the construction of it in one of their contracts, the work to be done at our expense, their estimate of the cost being approximately $10,000. This drain has been completed and we are now in a position to proceed with our twenty-foot fill at this point.

Contract No. 123 included the grading and paving, with bituminous concrete, of Forest Park avenue, from Callaway avenue to Grantley street; Springdale avenue, from Callaway avenue to Grantley street; Fairview avenue, from Garrison avenue to Grantley street, and Grantley street, from Fairview avenue to Forest Park avenue, and was awarded to the Baltimore Asphalt Block and Tile Company June 16. Shortly after our contract was awarded the Sewerage Commission awarded a contract that will provide drainage for this section of Forest Park. Their work has been rushed as much as possible, and we have been able to complete the paving of Springdale avenue, from Callaway avenue to Grantley street; of Fairview avenue, from Garrison avenue to Grantley street, and of Grantley street, from Fairview to Springdale avenues.

Contract No. 124, which included the paving, with bituminous concrete, of Arunah avenue, from Bentalou street to Warwick avenue; Warwick avenue, from Edmondson avenue to Arunah avenue; Wheeler avenue, from Edmondson avenue to Arunah avenue, and Thomas and Warwick avenues, from North avenue to Baker street, was awarded to the Baltimore Asphalt Block and Tile Company, August 27. All of the work in this contract was completed by the 31st of December, except one block of Warwick avenue, between Westwood avenue and North avenue. This block was completed January 2, 1914.

Contract No. 125 included the paving, with bituminous concrete, of Hickory avenue, between Thirty-sixth and Thirty-eighth streets, and Thirty-eighth street, between Hickory and Elm avenues, and was awarded to the Warner-Quinlan Asphalt Company July 23. Our rough grading of these streets caused the uncovering of gas and water mains, together with their house services, and we were considerably delayed while waiting for the Water Department and the Gas Company to lower their mains and services, an operation which is exceedingly slow, tedious and costly. Also we were compelled to again call on the City Engineer to install a drainage system in Thirty-eighth street at our expense. However, the contract was very satisfactorily completed on November 15, and was accepted by the city.

Contract No. 126, which included the paving, with sheet asphalt, of Ellamont street, Rosedale street and Braddish avenue, from North avenue to Baker street; of Whitmore avenue, from North avenue to Westwood avenue; Smallwood street, from Westwood avenue to Presbury street; Presbury street and Westwood avenue, from Smallwood street to Warwick avenue, and of Presbury street, from Ellamont street to Windsor Mill road, was awarded to the American Paving and Contracting Company, September 10. This contract has been pushed forward rapidly, and on December 31 was about 85 per cent. finished. We expect to complete the entire contract by the end of January.

Contract No. 127, which calls for the paving, with sheet asphalt, of Windsor avenue, from Dukeland street to Ellamont street, and of Poplar Grove street, Longwood street and Rosedale street, from Clifton avenue to Windsor avenue, and of

Clifton avenue, from Hilton to Denison streets, was awarded to the American Paving and Contracting Company, September 24. The grading of Windsor avenue requires fills amounting to about 18,000 yards, practically all of which is borrow. At the end of 1913 about half of this filling was completed. The actual paving of the streets in this contract will be postponed until the spring.

Contract No. 128 required the grading and paving, with sheet asphalt, of Greenway street, between Charles and St. Paul streets. It was awarded to the American Paving and Contracting Company, October 22, and the work was completed and accepted December 20.

I wish to call your attention to the fact that paving in the Annex is accompanied by difficulties that would not be imagined by the ordinary citizen, unless he gave the matter particular attention. At times the slow progress of our work is discouraging, both to the contractor and to your engineering force. The cause of this slow progress is unavoidable. Probably our greatest source of trouble is the uncovering of water and gas mains, together with their house connections. Most of the streets in the Annex have been graded at random by private parties, and the establishing of even a fairly good grade requires a considerable amount of grading. In most of our streets this grading uncovers these mains which have to be lowered, together with their house services, without interfering with the continuous supply of gas or water to the various houses. This process of lowering pipes is necessarily very slow and tedious, and although we have been seriously delayed on account of the necessity of lowering the pipes, I wish to say that the Gas Company and the Water Department have co-operated with us in a manner that is exceedingly satisfactory. Another source of delay is the uncovering of shallow private sewers, a great many of which we have encountered. In some instances it is highly impracticable to relay these sewers, as they are on flat grades, and their outfalls are so far from the scene of our operations that it would cost exceedingly large sums of money to relay them. In such instances it has been necessary to rearrange our grades at times, placing reinforcing material over the sewers and constructing our profiles so as to clear them without interfering with their continuous operation.

Baltimore city has probably been the busiest city in the United States, as regards construction work, during the past year, and all of the city departments and public service corporations have been taxed to the limit trying to arrange their work so as to interfere as little as possible with the operations of the other departments, and I believe that, taking this into consideration, the amount of work that has been carried through this year by your Commission should be considered exceedingly satisfactory.

During the year 1913 your Commission constructed 130,194 square yards of improved pavement, which amounts to 7.4 miles of street thirty feet wide. The grading done amounts to 152,000 cubic yards. In addition to this, there has been installed 8,000 lineal feet of armored concrete curb, and 10,300 square yards of concrete base, which will apply to the paving that will be finished in the spring. The quantity of work done by your Commission during 1913, as shown by these figures, breaks the record of any previous year, and I believe the quality of the work will compare as favorably with previous operations as does the quantity.

Taking into consideration the fact that we were unable to start a number of our contracts until late in the summer, owing to legal questions, decisions on which had to be awaited; also taking into consideration the fact that it was practically impossible to secure satisfactory vitrified blocks during the latter part of the summer, I believe that your Board should feel gratified at the amount of work that has been completed.

The various city departments and public service corporations have co-operated with us in a gratifying manner, and I hope they will be assured that their co-operation has been appreciated. Our engineering and inspecting forces have performed their duties with loyalty and energy.

I beg to attach hereto the following tables:

Table No. 1 shows the contracts that were let during 1912 and completed during 1913, together with all of the contracts that were let during 1913. Under these contracts is shown the amount of the various kinds of work that has been completed during 1913, together with the status of the work at the end of 1913.

Table No. 2 gives a statement of the contracts that were not finished during 1912, and which were finished during 1913, together with all the contracts let during 1913. In this table is shown the date of each contract, the contractor receiving the contract, the limits of the various streets, the status of the work on each street on December 31, 1913, and the date of the expiration of the guaranty on those streets, which have been finished.

In Table No. 3 are grouped the various streets that were paved during 1913 with bituminous concrete, sheet asphalt and vitrified brick. It also shows the yardage and mileage of the streets of these various classes of paving, together with the kind of asphalt and vitrified block used.

Table No. 4 gives a list of contracts that were let during 1913, and that were not completed December 31, 1913.

It should be borne in mind when considering this table, that the majority of the work shown on this table was not intended to be finished during 1913, the streets being two-year jobs, on account of the large amount of grading, and the large amount of city department work to be installed after grading is completed.

Table No. 5 is a tabulation in detail of the grading and paving work that has been done by your Commission since May 3, 1906.

There are also attached two charts, one showing graphically the amount of paving of the various classes completed during 1913, and the other showing the amount of the various classes completed since May 3, 1906.

Respectfully yours,

F. W. McKinney, *Chief Engineer.*

Summary of Expenses of This Department.

Original Appropriation, salaries		$9,900 00
Expenditures to December 15, 1913	$9,860 00	
Balance	40 00	
		9,900 00

Original Appropriation, expenses		$500 00

Expenditures to December 31, 1913.

Newspapers	$11 48	
Miscellaneous expenses	30 00	
Stationery and printing	51 20	
Typewriter; purchase, hire, supplies	211 51	
Premium on bonds	25 00	
Bookbinding	49 25	
Directory	7 00	
Stamps	85 00	
Recording deeds	17 00	
Balance	12 56	
		500 00

ANNEX LOAN ACCOUNT.

Original Appropriation, salaries	$19,820 00
Credit to appropriation	3 58
	$19,823 58
Expenditures to December 31, 1913	19,823 58

CHARGED TO EXPENSE ACCOUNT.

EXPENDITURES TO DECEMBER 31, 1913.

Recording deeds	$58 00
Examination of titles	902 55
Expense account of employees, carfare and out of town expenses	395 07
Engineering instruments and supplies	951 07
Office supplies and miscellaneous articles, etc	218 37
Automobile purchase and repairs, etc	836 80
Furniture	111 38
Books and bookbinding	29 50
Stamps	30 00
Printing	77 65
Automobile hire, use of Commissioners and expert asphalt inspectors	214 00
Test of materials by City Engineer and Sewerage Commission	1,491 67
Blue printing	113 64
Sewerage Commission, raising and lowering manholes, etc., at different locations	106 03
Copies of condemnation plats	88 24
Health Department, repairs to sewers in Twenty-eighth street	63 10
Expenses on Barclay street	16 42
Ground rent on property acquired, condemnation proceedings	8 00
Care of trees	25 21
Real estate expert services	35 00
Purchase of land at Clifton avenue and Denison street	807 19
Miscellaneous advertising	39 60
Bromley's Atlas	30 00
Cleaning wells	27 90
Wrecking house on Hilton street	120 70
Miscellaneous grade establishments	441 28
Miscellaneous taxes and benefits	360 72
Advertising Contract No. 108	26 83
Advertising Contract No. 109	26 84
Advertising Contract No. 117	11 45
Advertising Contract No. 120	48 91
Advertising Contract No. 128	50 42
Amount carried forward	7,763 54

Amount brought forward		$7,763 54
Parking Thirty-second street and Thirty-third street, between Charles street and St. Paul street:		
Morfit	$403 11	
City Engineer	90 31	
		493 42
Grading Moses alley:		
Milton Holbrook	$493 50	
City Engineer, sewer	534 63	
		1,028 13
Thirty-first street opening, Huntingdon avenue to Remington avenue		5,681 94
Parking Belle avenue:		
Morfit	$645 97	
City Engineer	339 90	
		985 87
Advertising Contract No. 127		49 30
Advertising Contract No. 122		41 81
Garrison, Berwyn and Liberty Heights avenues opening from Clifton avenue to the western city limits, damages and benefits		9,461 24
Beech avenue grading, from Garrison avenue to Denison street		338 40
Harford road widening, from North avenue to the eastern city limits		40,034 52
Salaries of employees charged to expense		2,969 92
Miscellaneous construction and repairs		218 14
Allendale street parking		513 29

Contract No. 7, dated June 26, 1912.

Wm. M. Elder Paving & Contracting Co.

Fortieth street, from Roland avenue to University Parkway. Final estimate:		
17,126 cu. yds. grading, at 44c	$7,535 44	
8,063 sq. yds. sheet asphalt paving on 4-in. concrete base, at $1.55	12,497 65	
75 sq. yds. cobble repaving, at 36c	27 00	
Amount carried forward		69,579 52

Amount brought forward		$69,579 52
4,216.2 lin. ft. 6-in. concrete curb, at 53c	$2,234 59	
224 lin. ft. headers, at 12c	26 88	
	22,321 56	
Less amount paid in 1912	10,297 80	
	$12,023 76	
Extra work:		
Iron fence	348 50	
Boardwalk	80 22	
Extra concrete base	1,916 88	
City Engineer, inlet construction, etc	643 15	
		15,012 51

Contract No. 8, dated June 21, 1912.

F. E. Schneider Paving Co.

Newington avenue, from Park avenue to Mt. Royal Terrace. Final estimate:		
412 cu. yds. grading, at 42c	$173 04	
1351 sq. yds. bituminous concrete paving on 4-in. concrete base, at $1.35	1,823 85	
22 sq. yds. vitrified brick gutters on 6-in. concrete base, at $2.05	45 10	
11 sq. yds. cobble repaving, at 30c	3 30	
470 lin. ft. 6-in. concrete curb, at 58c	272 60	
53 lin. ft. headers, at 20c	10 60	
	$2,328 49	
Extra work	45 75	
		2,374 24
Orem avenue, Woodbrook avenue and Parkwood avenue, paved under Contract No. 10 in 1912. F. E. Schneider Paving Co.:		
City Engineer, grades	$46 80	
City Engineer, footways	120 94	
City Engineer, parking	1,117 09	
Park Board, parking	106 36	
		1,391 19
Amount carried forward		88,357 46

Amount bronght forward		$88,357 46

Contract No. 11, dated September 19, 1912.

F. E. Schneider Paving Co.

Payson street, from North avenue to Westwood avenue; Pulaski street, from North avenue to Westwood avenue; Smallwood street, from North avenue to Westwood avenue; Westwood avenue, from Payson street to Smallwood street; Bentalou street, from North avenue to Presbury street; Eighth street, from North avenue to Westwood avenue. Final estimate:

3,339 cu. yds. grading, at 25c	$834 75	
10,519 sq. yds. bituminous concrete paving on 4-inch concrete base, at $1.24	13,043 56	
759 sq. yds. vitrified block gutter, on 6-inch concrete base, at $2.05	1,555 95	
281 sq. yds. cobble repairing, at 35c	98 35	
4,651 lin. ft. 6-inch armored concrete curb and circles, af 54c	2,511 54	
442 lin. ft. old curb reset as headers, at 12c	53 04	
755.5 sq. yds. bituminous concrete (special), at $1	755 50	
	$18,852 69	
To 26,000 sq. ft. cobble, at 1½c	390 00	
To raising one B. S. C. manhole	2 56	
	$18,460 13	
Deductions	650 17	
	$17,809 96	
Less payment in 1912	10,279 36	
	$7,530 60	
Extra work	123 89	
Sewerage Commission	2 56	
		7,657 05
Amount carried forward		96,014 51

Amount brought forward		$96,014 51

Contract No. 12, dated September 10, 1912.

P. Flanigan & Sons.

Calvert street, from North avenue to Twentieth street. Final estimate:

4,168 cu. yds. grading, at 40c	$1,667 20	
1,373 sq. yds. sheet asphalt paving on 4-in. concrete base, at $1.50	2,059 50	
27 sq. yds. vitrified block gutters on 6-in. concrete base, at $2	54 00	
12 sq. yds. cobble repairing, at 30c	3 60	
721.1 lin. ft. 6-in. armored concrete curb and circles, at 54c	389 39	
	$4,173 69	
Less payment in 1912	640 00	
	$3,533 69	
Extra work	420 00	
		3,953 69

Contract No. 13, dated October 9, 1912.

P. Flanigan & Sons.

Twentieth street, from Kennedy avenue to Aisquith street; Twenty-second street, from Taylor street to 172 feet eastwardly; Cec avenue, from Twentieth street to Twenty-second street; Berry street, from Elm avenue to Chestnut avenue; Mason alley, from Ducatel street to Whitelock street. Final estimate:

4,720 cu. yds. grading, at 38c	$1,793 60	
6,670 sq. yds. vitrified block gutter on 6-in. concrete base, at $2.07	13,806 90	
101 sq. yds. cobble repairing, at 35c	35 35	
2,461.2 lin. ft. 6-in. armored concrete curb and circles, at 57c	1,402 88	
Amount carried forward		99,968 20

Amount brought forward		$99,968 20
1,461 lin. ft. old curb reset as headers, at 15c	219 15	
	$17,257 88	
Less payments in 1912	1,102 80	
	$16,155 08	
Extra work	207 80	
		16,362 88

Contract No. 14, dated November 14, 1912.

Wm. M. Elder Paving & Contracting Co.

Twenty-ninth street, from Huntingdon avenue to Hampden avenue. Final estimate:

683 cu. yds. grading at 30c	$204 90	
1,645 sq. yds. vitrified block paving on 6-in. concrete base, at $2.05	3,372 25	
79 sq. yds. cobble repairing, at 30c	23 70	
691.7 lin. ft. 6-in. armored concrete curb and circles, at 50c	345 85	
179 lin. ft. old curb reset as headers, at 10c.	17 90	
	$3,964 60	
Less payments in 1912	134 00	
		3,830 60

Contract No. 15, dated November 14, 1912.

Wm. M. Elder Paving & Contracting Co.

Second avenue, from Elm avenue to Chestnut avenue; Twenty-eighth street, from Huntingdon avenue to Hampden avenue; Twenty-seventh street, from Calvert street to Guilford avenue; Twenty-sixth street, from Calvert street to Guilford avenue; Hampden avenue, from Twenty-seventh street to Twenty-ninth street; Oak street, from Twenty-sixth street to Twenty-seventh street; Chester street, from North avenue to Clifton Park; Malakoff street, from Washington street to Chester street. Final estimate:

4,726 cu. yds. grading, at 30c	$1,417 80	
Amount carried forward		120,161 68

Amount brought forward		$120,161 68
14,154 sq. yds. bituminous concrete paving on 4-in. concrete base, at $1.24	17,550 96	
1,377 sq. yds. vitrified block gutter on 6-in. concrete base, at $2.00	2,754 00	
407 sq. yds. cobble repairing, at 30c	122 10	
7,506.1 lin. ft. 6-in. armored concrete curb and circles, at 50c	3,753 05	
738 lin. ft. old curb reset as headers, at 10c.	73 80	
524 sq. yds. 2-in. concrete base (extra), at 30c	157 20	
	$25,828 91	
To 27,337 sq. ft. cobble, at 3c	820 11	
	$25,008 80	
Deduction	372 60	
	$24,636 20	
Less payment in 1912	664 00	
Extra work:	$23,972 20	
Hauling, ditches, rip rap, etc	565 11	
City Engineer, grade establishment, etc	359 82	24,897 13
Huntingdon avenue, from Twenty-fifth street to Thirty-first street. Contract No. 1, paid in 1912:		
Sewerage Commission	$2 02	
Electrical Commission	28 86	
Morfit, parking	1,657 03	
City Engineer, parking	1,462 56	
Park Board, parking	50 59	
Schneider Paving Co	42 94	3,244 00

Contract No. 106, dated June 2, 1913.

P. Flanigan & Sons.

Westwood avenue, from Poplar Grove street to Hilton street. Estimate No. 4:		
Amount of work completed as shown by current estimate	$19,368 97	
Less reservation	200 00	
	$19,168 97	
Advertising	22 76	19,191 73
Amount carried forward		167,494 54

Amount brought forward		$167,494 54

Contract No. 107, dated April 29, 1913.

F. Flanigan & Sons.

Oak street, from University Parkway to Mallory lane. Final estimate:		
8,588 cu. yds. grading, at 45c	$3,864 60	
4,796 sq. yds. bituminous concrete paving on 6-inch concrete base, at $1.45	6,954 20	
438 sq. yds. vitrified block gutter, on 6-inch concrete base, at $2.25	985 50	
27 sq. yds. cobble repairing, at 45c	12 15	
3,073.4 lin. ft. 6-inch armored concrete curb and circles, at 60c	1,844 04	
100 lin. ft. old curb reset as headers, at 15c.	15 00	
	$13,675 49	
Extra work	297 15	
Advertising	11 32	
City Engineer, drainage work	1,734 15	
		15,718 11

Contract No. 110, dated May 30, 1913.

Eastern Paving Co.

Augusta avenue, from Frederick road to Old Frederick road. Final estimate:		
1,952 cu. yds. grading, at 58c	$1,132 16	
2,683 sq. yds. bituminous concrete paving on 6-in. concrete base, at $1,55	4,158 65	
445 sq. yds. vitrified block gutter, on 6-in. concrete base, at $2.22	987 90	
183 sq. yds, cobble repairing, at 12c	21 96	
3,196 lin. ft. 6-in. armored concrete curb and circles, at 63c	2,013 48	
264 lin. ft. granite block headers, at 20c	52 80	
4,167 sq. yds. bituminous concrete (special), at $1.49	6,208 83	
	$14,575 78	
Extra work:		
Sewerage Commission, inlets	26 59	
Advertising	26 83	
Gravel	56 00	
		14,685 20
Amount carried forward		197,897 85

Amount brought forward		$197,897 85

Contract No. 111, dated June 5, 1913.

Penn-Mar Construction Co.

Fayette street, from Catherine street to Shipley street; Fairmount avenue, from Catherine street to Shipley street; Catherine street, from Baltimore street to Fayette street; Shipley street, from Baltimore street to Fayette street. Final estimate:

2,998 cu. yds. grading, at 40c	$1,199 20	
6,107 sq. yds. bituminous concrete paving on 6-inch concrete base, at $1.55	9,465 85	
596 sq. yds. vitrified block gutter on 6-inch concrete base, at $2.20	1,311 20	
65 sq. yds. cobble repairing, at 35c	22 75	
4,090.7 lin. ft. 6-in. armored concrete curb and circles, at 60c	2,454 42	
189 lin. ft. old curb reset as headers, at 20c.	37 80	
	$14,491 22	
To 57,000 sq. ft. old cobble, at ¼c	142.50	
	$14,348 72	
Extra work:		
City Engineer, grade	12 08	
City Engineer, cellar drain	50 68	
Belz & Bunnecke, cellar drain	27 75	
Heigle & Brother, cellar drain	23 50	
Electrical Commission	113 92	
Advertising	26 83	
		14,603 48

Contract No. 112, dated June 19, 1913.

J. H. Cranford Construction Co.

Hilton street, from Morris avenue to Windsor avenue. Final estimate:

2,033 cu. yds. grading at 40c	$813 20	
5,975 sq. yds. sheet asphalt paving on 6-in. concrete base, at $1.78	10,635 50	
17 sq. yds. vitrified block paving, in railway tracks, on 6-in. concrete base, at $2.25	38 25	
Amount carried forward		212,501 33

Amount brought forward		$212,501 33
391 sq. yds. vitrified block gutters on 6-in. concrete base, at $2.15	840 65	
91 sq. yds. cobble repairing, at 35c	31 85	
3,174.2 lin. ft. 6-in. armored concrete curb and circles, at 58c	1,841 04	
307 lin. ft. old curb reset as headers, at 20c.	61 40	
42 sq. yds. wood block liners along rails, including 6-in. concrete foundation, at $3.25	136 50	
	$14,398 39	
Extra work:		
City Engineer, inlets	105 79	
Advertising	11 45	
		14,515 63

Contract No. 113, dated June 19, 1913.

J. H. Cranford Construction Co.

Forest Park avenue, from Garrison avenue to the western city limits; Kathland avenue, from Garrison avenue to the western city limits. Final estimate:

2,655 cu. yds. grading, at 40c	$1,062 00	
5,972 sq. yds. bituminous concrete on 6-in. concrete base, at $1.60	9,555 20	
210 sq. yds. vitrified block paving on 6-in. concrete base, at $2.20	462 00	
59 sq. yds. cobble repairing, at 35c	20 65	
3,929.5 lin. ft. 6-in. armored concrete curb and circles, at 58c	2,279 11	
199 lin. ft. granite block headers, at 10c	19 90	
	$13,398 86	
Advertising	11 44	
		13,410 30
Amount carried forward		240,427 26

Amount brought forward		$240,427 26

Contract No. 114, dated June 19, 1913.

J. H. Cranford Construction Co.

Callaway avenue, from Garrison avenue to Liberty Heights avenue; Cleveland avenue, from Garrison avenue to Liberty Heights avenue. Estimate No. 2:		
Amount of work completed as shown by current estimate	$4,174 00	
Less 20 per cent	834 80	
	$3,339 20	
Advertising	11 44	
		3,350 64

Contract No. 115, dated June 13, 1913.

P. Flanigan & Sons.

Bernard street, from Twenty-sixth street to Thirtieth street. Final estimate:		
1,109 cu. yds. grading, at 60c	665 40	
3,143 sq. yds. bituminous concrete paving on 6-in. concrete base, at $1.45	4,557 35	
413 sq. yds. vitrified block gutter, on 6-in. concrete base, at $2.20	908 60	
34 sq. yds. cobble repairing, at 45c	15 30	
2,643.3 lin. ft. 6-in. armored concrete curb and circles, at 60c	1,585 98	
79 lin. ft. old curb reset as headers, at 15c	11 85	
	$7,744 48	
Extra work:		
City Engineer, grade and inlets	144 01	
Advertising	47 46	
		7,935 95

Contract No. 116, dated June 19, 1913.

J. H. Cranford Construction Co.

Dukeland street, from North avenue to Windsor avenue. Estimate No. 1:		
Amount of work completed as shown by current estimate	$1,500 00	
Less 20%	300 00	
	$1,200 00	
Advertising	11.46	
		1,211 46
Amount carried forward		252,925 31

Amount brought forward		$252,925 31

Contract No. 118, dated June 4, 1913.

Frech & Allen.

Hilton street, from Edmondson avenue to Frederick road. Estimate No. 5:		
Amount of work completed as shown by current estimate	$19,692 80	
Less 20%	3,938 56	
	$15,754 24	
Extra work	2,787 75	
City Engineer, grade	86 33	
Advertising	24 64	
		18,652 96

Contract No. 119, dated June 20, 1913.

Thomas Mullan.

Twenty-seventh street, from Huntingdon avenue to Sisson street. Final estimate:		
1,412 cu. yds. grading, at 50c	$706 00	
2,771 sq. yds. vitrified block paving on 6-in. concrete base, at $2.23	6,179 33	
52 sq. yds. cobble repairing, at 30c	15 60	
1,499.5 lin. ft. 6-in. armored concrete curb and circles, at 59c	884 71	
157 lin. ft. old curb reset as headers, at 15c.	23.55	
	$7,809 19	
Extra work:		
Curbs and grading	202 31	
City Engineer, inlets and grade establishment	85 88	
Sewerage Commission	7 84	
Advertising	22 82	
		8,128 04

Contract No. 121, dated July 14, 1913.

Baltimore Asphalt Block & Tile Co.

Guilford avenue, from Twenty-seventh street to Thirty-first street; Twenty-eight street, from Calvert street to Guilford avenue; Thirtieth street, from Calvert street to Guilford Avenue. Final estimate:		
3,340 cu. yds. grading, at 40c	$1,336 00	
Amount carried forward		279,706 31

Amount brought forward		$279,706 31
9,797 sq. yds. bituminous concrete paving on 6-in. concrete base, at $1.55	15,185 35	
470 sq. yds. vitrified block gutter on 6-in. concrete base, at $2.20	1,034 00	
111 sq. yds. cobble repairing, at 45c	49 95	
3,325.5 lin. ft. 6-in. armored concrete curb and circles, at 60c	1,995 30	
268 lin. ft. old curb reset as headers, at 20c.	53 60	
	$19,654 20	
Extra work:		
City Engineer, grade establishment	12 25	
Sewerage Commission, inlets	93 94	
Cook, curbs and grading	351 60	
Brandau, curbs and grading	682 62	
Advertising	44 72	
		20,839 33

Contract No. 123, dated July 23, 1913.

Baltimore Asphalt Block & Tile Co.

Forest Park avenue, from Callaway avenue to Grantley street; Springdale avenue, from Callaway avenue to Grantley street; Fairview avenue, from Garrison avenue to Grantley street; Grantley street, from Fairview avenue to Forest Park avenue. Estimate No. 4:		
Amount of work completed as shown by current estimate	$13,766 25	
Less 20%	2,753 25	
	11,013 00	
Advertising	47 25	
		11,060 25
Amount carried forward		311,605 89

Amount brought forward		$311,605 89

Contract No. 124, dated September 3, 1913.

Baltimore Asphalt Block & Tile Co.

Thomas avenue, from North avenue to Baker street; Warwick avenue, from North avenue to Baker street; Arunah avenue, from Bentalou street to Warwick avenue; Warwick avenue, from Edmondson avenue to Arunah avenue; Wheeler avenue, from Edmondson avenue to Arunah avenue. Estimate No. 2:

Amount of work completed as shown by current estimate	$15,891 00	
Less 20%	3,178 20	
	$12,712 80	
Extra work:		
City Engineer, grade	11 52	
Advertising	76 87	
		12,801 19

Contract No. 125, dated July 20, 1913.

Warner-Quinlan Asphalt Co.

Hickory Avenue, from Thirty-sixth street to Thirty-eighth street; Thirty-eighth street, from Hickory avenue to Elm avenue. Final estimate:

4,471 cu. yds. grading, at 55c	$2,459 05	
5,657 sq. yds. bituminous concrete paving on 6-in. concrete base, at $1.57	8,881 49	
679 sq. yds. vitrified block gutter, on 6-in. concrete base, at $2.30	1,561 70	
99 sq. yds. cobble repairing, at 40c	39 60	
3,838.2 lin. ft. 6-in. armored concrete curb and circles, at 60c	2,302 92	
179 lin. ft. old curb reset as headers, at 20c.	39 40	
	$15,284 16	
Extra work:		
City Engineer, drain	1,708 12	
Advertising	27 56	
		17,019 84
Amount carried forward		341,426 92

Amount brought forward		$341,426 92

Contract No. 126, dated September 18, 1913.

American Paving and Contracting Co.

Ellamont street, from North avenue to Baker street; Rosedale street, from North avenue to Baker street; Braddish avenue, from North avenue to Baker street; Whitmore avenue, from North avenue to Westwood avenue; Presbury street, from Ellamont street to Windsor Mill road; Smallwood street, from Westwood avenue to Presbury street; Presbury street, from Smallwood street to Warwick avenue; Westwood avenue, from Smallwood street to Warwick avenue. Estimate No. 2:

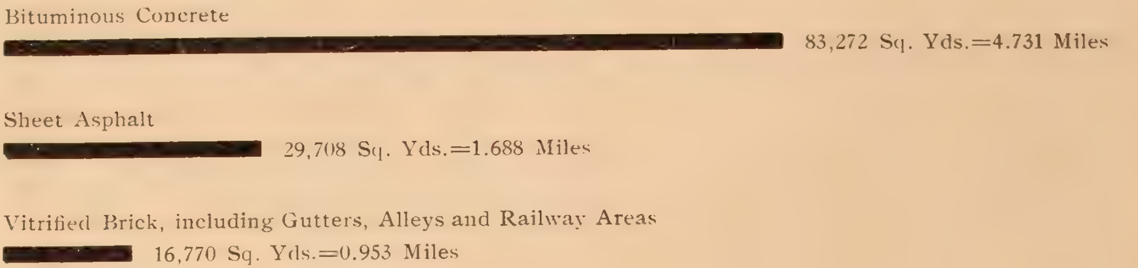
Amount of work completed as shown by current estimate	$24,581 50	
Less 20 per cent	4,916 30	
	$19,665 20	
Extra work:		
Grade, inlets and drains	1,167 90	
Patapsco Real Estate and Construction Co., curbs	98 60	
Advertising	58 23	
		20,989 93
Total amount of expenditures		$362,416 85

Respectfully submitted,

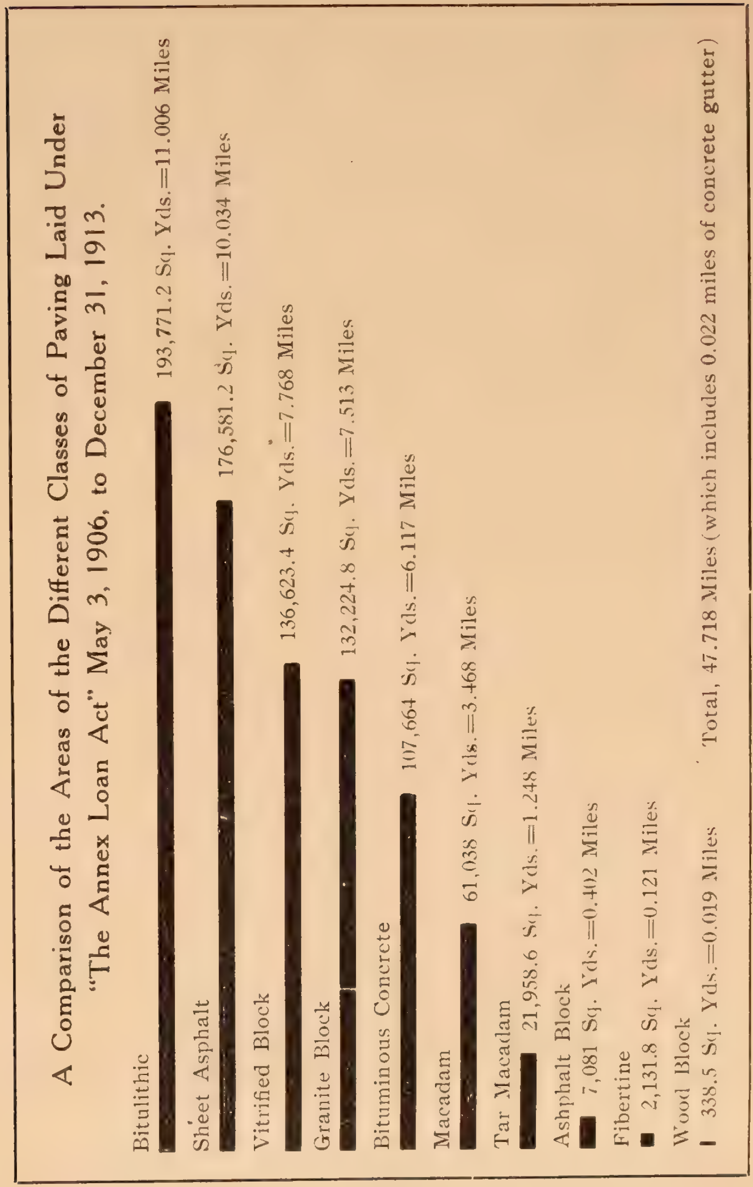
EUGENE E. GRANNAN, *President.*
JOHN L. SANFORD,
HARRY A. REMLEY,
Commissioners.

EUGENE F. RODGERS,
Secretary.

A Comparison of the Areas of the Different Classes of Paving Laid Under "The Annex Loan Act" January 1, 1913, to December 31, 1913.



Total, 7.397 Miles (which includes 0.025 miles of concrete gutter)



A Comparison of the Areas of the Different Classes of Paving Laid Under "The Annex Loan Act" May 3, 1906, to December 31, 1913.

TABLE No. 1—PAVING UNDER ANNEX LOAN ACT, JANUARY 1, 1913, TO DECEMBER 31, 1913

Contract Number.	Street	From	To	Lineal Feet Length	Feet Width Between Building Line.	Feet Width Between Curb	Square Yards Sheet Asphalt, 2 inch Topping, 1½-inch Binder, on 6-inch Concrete Base	Square Yards Sheet Asphalt, 1½-inch Topping, 1½-inch Binder, on 6-inch Concrete Base	Square Yards Sheet Asphalt, 2 inch Topping, 1½-inch Binder, on 4 inch Concrete Base	Square Yards Bituminous Concrete, 2 inch Topping, on 6 inch Concrete Base	Square Yards Bituminous Concrete, 2 inch Topping, on 4-inch Concrete Base	Square Yards Vitrified Brick, on 6 inch Concrete Base	Square Yards Vitrified Brick Gutters, 6 inch Concrete Base	Square Yards Vitrified Brick Gutters, 4 inch Concrete Base	Square Yards Vitrified Brick Railway Area, 6 inch Concrete Base.	Square Yards Wood Block Liners on 6-inch Concrete Base	Feet 6-inch Concrete Curb.	Feet Combination Concrete Curb and Gutter	Feet Header.	Square Yards Cobble.	Cubic Yards Grading.	Total Yardage.	State of Completion.	Remarks	Miles of Street 30 Feet Wide
97	Fortieth street	E. C. L. Roland avenue	W. C. L. University Parkway	1,373 0	80 0	32 0	5,400										2,716 2		224	75	2,657	5,400.0	Completed	Contracts 7 to 15 were awarded during 1912 and paving completed during 1913.	.307
98	Newington avenue	E. B. L. Park avenue	W. B. L. Mount Royal avenue	303 0	66 0	39 6					1,351			22			470 0		53	11	412	1,373 0	Completed		.078
101	Bentalou street	S. B. L. North avenue	N. B. L. Presbury street	170 0	66 0	40 0					755			56			1,251 5		135	52	507	811 0	Completed		.046
101	Longwood street	S. B. L. North avenue	N. B. L. Westwood avenue	273 0	66 0	39				1,144.0			111				581 5		69	105	220	1,255.0	Completed		.072
102	Calvert street	N. B. L. North avenue	S. B. L. Twentieth street	345 [illegible]	66 0	36			1,373					27			721 1			12	1,168	1,400 0	Completed		079
103	Twentieth street	E. B. L. Kennedy avenue	W. B. L. Asquith street	387 0	66 0	39						1,795 0					790.2		101	34	906	1,795.0	Completed		.102
103	Berry street	E. C. L. Elm avenue	W. C. L. Chestnut avenue	184 3	16 0	12 0						703 0					469 5		16	17	574	703 0	Completed		.040
103	Mason alley	N. B. L. [illegible] street	S. B. L. Whitelock street	595.7	20 5	20 5						1,286 0							1,172		1,028	1,286 0	Completed		073
104	Twenty-ninth street	W. B. L. Huntingdon avenue	W. B. L. Hampden avenue	353 0	66 0	32 0						1,645 0					176.7		179	79	683	1,645 0	Completed		.093
105	Thirty-fourth street	W. B. L. Chestnut avenue	W. B. L. Elm avenue	510 0	66 0	36 0					1,912		192				970.2		162	43	581	2,104 0	Completed		120
105	Twenty-eighth street	W. B. L. Huntingdon avenue	E. B. L. Hampden avenue	320 2	66 0	32 0					1,158		140						48	29		1,298 0	Completed		073
105	Twenty-seventh street	E. B. L. Calvert street	W. B. L. Guilford avenue	328 0	66 0	39 6					1,333		152				656 0		48	36	450	1,485.0	Completed		.084
105	Twenty-sixth street	E. B. L. Calvert street	W. B. L. Guilford avenue	32[illegible] 0	66 0	30 0					1,340		122				657 0		10	51	402	1,462 0	Completed		083
105	Hampden avenue	S. B. L. Twenty-seventh street	S. B. L. Twenty-ninth street	376 0	66 0	30 0					1,254		252						182	162		1,506 0	Completed		.086
105	Oak street	N. B. L. Twenty-sixth street	N. B. L. Twenty-seventh street	462 0	66 0	36 6					2,042		146				878 5		135	53	612	2,188 0	Completed		.120
105	Chester street	N. B. L. North avenue	Clifton Park	608 0	70 0	42 0				524 0	2,193		217				1,185 1		99	26	1,000	2,934 0	Completed		.166
105	Malakoff street	E. B. L. Washington street	W. B. L. Chester street	424 3	40 0	24 0					1,048		156				829 3		54	7	816	1,204 0	Completed		.068
106	Westwood avenue	W. B. L. Poplar Grove street	E. B. L. Hilton street	1,301 0	66 0	32 0				4,664 0			391		165	11.5	2,547 8		212	100	13,500	5,231.5	Under construction	First 1913 contract	.297
107	Oak street	N. C. L. University Parkway	S. B. L. Mallory lane	1,504 3	60 0	30				4,796 0			438				3,073 4		100	27	8,588	5,234 0	Completed		297
108	Smallwood street	N. B. L. Walbrook avenue	N. B. L. Clifton avenue		66 0	30 0																	Not started		
108	Clifton avenue	E. B. L. Smallwood street	W. B. L. 1st alley east of McKean ave		66 0	30 0											670.0				2,000		Under construction		
110	Augusta avenue	N. B. L. Frederick avenue	S. C. L. Old Frederick road	1,302 55	90 0	40 0				6,850 0			445				3,106 0		264	183	1,952	7,295 0	Completed		.414
111	Fayette street	W. B. L. Catherine street	W. B. L. Shipley street	666 6	60 0	30 0				2,115 0			184				1,348 4		62	4	947	2,299 0	Completed		.130
111	Fairmount avenue	W. B. L. Catherine street	E. B. L. Shipley street	526 0	60 0	30 0				1,614 0			146				1,051 0				1,041	1,760 0	Completed		100
111	Catherine street	N. B. L. Baltimore street	N. B. L. Fayette street	434 75	60 0	30 0				1,178.0			113				904 1		60	36	567	1,591 0	Completed		.090
111	Shipley street	N. B. L. Baltimore street	S. B. L. Fayette street	413 7	30 0	[illegible]				900.0			153				786 3		67	25	443	1,053 0	Completed		.060
112	Hilton street	N. B. L. [illegible]	S. B. L. Windsor avenue	1,627 0	66 0	[illegible]	5,075						391		17	42 0	3,174.2		307	91	2,033	6,425 0	Completed		.365
113	Forest Park avenue	W. B. L. Garrison avenue	Western city line	1,687 4	40 0	24 0 31 0				4,899 0			210				3,130 5		173	53	2,390	5,109 0	Completed		.290
113	[illegible] avenue	N. B. L. [illegible] avenue	Western city line	399 25	50 0	24 0				1,073 0							709 0		26	6	265	1,073 0	Completed		061
114	Cleveland avenue	N. B. L. Springdale avenue	S. B. L. Liberty Heights avenue	621 0	50 0	30 0				1,924.0							1,242 0				147	1,924 0	Completed		110
114	Callaway avenue	N. B. L. [illegible]	S. B. L. Liberty Heights avenue		50 0	30 0																	Not started		
115	Bernard street	N. B. L. Twenty-sixth street	S. B. L. Thirtieth street	1,338.4	40 0	24 0				3,143 0			413				2,643.3		79	34	1,109	3,556.0	Completed		.202
116	Dukeland street	N. C. L. North avenue	N. B. L. Windsor avenue		66 0	40 0											1,500 0				5,000		Under construction		
118	Hilton street	S. C. L. Edmondson avenue	N. B. L. Frederick road		75 0	40 0															58,246		Under construction		
119	Twenty-seventh street	W. B. L. Huntingdon avenue	E. B. L. Sisson street	600 6	66 0	32 0						2,771.0					1,499.5		157	52	1,412	2,771 0	Completed		.160
120	Cedar avenue	Thirty-third street	Carwell avenue		60 0	30 0																	Not started		
120	Carwell avenue	Chestnut avenue	Cedar avenue		60 0	30 0																	Not started		
120	Thirty-sixth street	Chestnut avenue	Cedar avenue		60 0	30 0																	Not started		
120	Thirty-fourth street	Cedar avenue	Dulin avenue		60 0	30 0																	Not started		
120	Dulin street	Thirty-third street	Thirty-fourth street		60 0	30 0																	Not started		
121	Guilford avenue	N. B. L. Twenty-seventh street	S. B. L. Thirty-first street	1,740 0	60 0	30 0				7,037 0			245				2,497 8		188	77	2,326	7,282 0	Completed		414
121	Twenty-eighth street	E. B. L. Calvert street	W. B. L. Guilford avenue	327 4	66 0	30 0				1,351 0			152				495.0		40	18	645	1,503 0	Completed		086
121	Thirtieth street	E. B. L. Calvert street	W. B. L. Guilford avenue	321 2	66 0	30 6				1,409 0			73				332 7		40	16	369	1,482 0	Completed		084
122	Thirty-third street	E. C. L. St. Paul street	W. C. L. Hillen road		120 0	[illegible] 24 0															5,000		Under construction		
123	Forest Park avenue	E. B. L. Callaway avenue	W. B. L. Grantley street		50 0	30 0																	Not started		
123	Springdale avenue	E. B. L. Callaway avenue	W. B. L. Grantley street	655 0	50 0	30 0				1,819 0			182				1,310 0				501	2,001 0	Completed		113
123	Fairview avenue	E. B. L. Garrison avenue	W. B. L. Grantley street	938 0	50 0	30 0				2,604 0			250				1,876 0				837	2,854 0	Completed		162
123	Grantley street	S. B. L. Fairview avenue	N. B. L. Forest Park avenue	415 0	50 0	30 0				1,120 0							600 0				674	1,120 0	Under construction		064
124	Thomas avenue	S. B. L. North avenue	N. B. L. Baker street	1,071 0	66 0	30 0				3,400 0			470				2,000 0		100	50	1,200	3,870 0	Completed		.220
124	Warwick avenue	S. B. L. North avenue	N. B. L. Baker street	733 0	66 0	30 0				3,340.0			182				2,000 0		100	50	1,607	3,522 0	Under construction		.200
124	Arunah avenue	W. B. L. Bentalou street	W. B. L. Warwick avenue	875 7	66 0	30 6				4,114 0			30				1,703.9		159	44	971	4,144 0	Completed		236
124	Warwick avenue	N. B. L. Edmondson avenue	S. B. L. Arunah avenue	200 6	66 0	30 6				916 0							430 9		20	3	317	916 0	Completed		.052
124	Wheeler avenue	N. C. L. Edmondson avenue	S. B. L. Arunah avenue	219 25	66 0	30 6				995.0							397 4		17		347	995 0	Completed		.057
125	Hickory avenue	N. B. L. Thirty-sixth street	N. B. L. Thirty-eighth street	1,093 45	60 0	32 0				3,720 0			378				2,197 0		135	63	1,942	4,098 0	Completed		233
125	Thirty-eighth street	E. B. L. Hickory avenue	W. B. L. Elm avenue	785 4	60 0	24 0				1,937.0			301				1,641 2		62	36	2,520	2,238 0	Completed		.127
126	Ellamont street	S. B. L. North avenue	N. B. L. Baker street		66 0	32 0							250				2,100 0				1,000	250 0	Under construction	4,000 square yards base.	.014
126	Rosedale street	S. B. L. North avenue	N. B. L. Baker street	687 0	66 0	32 0		2,628					221				1,700.0				3,000	2,849 0	Under construction	1,372 square yards base.	162
126	Braddish avenue	S. B. L. North avenue	N. B. L. Baker street		66 0	24 0											2,200.0				1,121		Under construction	3,200 square yards base.	
126	Whitmore avenue	S. B. L. North avenue	N. C. L. Westwood avenue	321 0	66 0	32 0		1,006					120				650.0		75	10	333	1,126 0	Completed		.064
126	Smallwood street	S. C. L. Westwood avenue	S. B. L. Presbury street	274 0	66 0	[illegible]		1,100					100				490.0				224	1,200 0	Under construction	400 square yards base.	.062
126	Presbury street	E. B. L. Ellamont street	W. B. L. Windsor Mill road		66 0	[illegible]							100				800 0				400	100 0	Under construction	1,300 square yards base.	.005
126	Presbury street	W. B. L. Smallwood street	E. B. L. Warwick avenue	1,204 0	66 0	[illegible]		4,423					300				2,400 0		100	50	1,091	4,723 0	Completed		228
126	Westwood avenue	W. B. L. Smallwood street	E. B. L. Warwick avenue	1,102 0	66 0	[illegible]		5,000					557				2,200.0		100		1,900	5,557 0	Completed		316
127	Windsor avenue	W. B. L. Dukeland street	E. B. L. Ellamont street		66 0	[illegible]															5,000		Under construction		
127	Poplar Grove street	N. B. L. Clifton avenue	S. B. L. Windsor avenue		66 0	[illegible]																	Not started		
127	Longwood street	N. B. L. Clifton avenue	S. B. L. Windsor avenue		66 0	[illegible]																	Not started		
127	Rosedale street	S. B. L. Clifton avenue	S. B. L. Windsor avenue		66 0	0																	Not started		
127	Clifton avenue	W. B. L. Hilton street	E. B. L. Denison street		66 0	0																	Not started		
128	Greenway	E. B. L. Hopkins Circle	W. C. L. St. Paul street	705 0	66 0	[illegible]	2,803											1,401.4	117		3,000	*3,193 0	Completed		[illegible]
	Total			34,163 Feet. 6,470 Miles.			14,178	14,157	1,373	68,886.0	14,385	8,200.0	8,283	105	182	53.5	70,091.1	1,401.4	5,447	1,910	151,986	130,193			[illegible]

*Total yardage includes 390 square yards concrete gutter.

TABLE No. 2—STATEMENT OF CONTRACTS AWARDED DURING 1913 AND THEIR STATE OF COMPLETION WITH PORTIONS OF 1912 CONTRACTS COMPLETED DURING 1913

Contract Number.	Date of Contract	Contractor.	Street.	From.	To	Status of Work December 31, 1913.	Guarantee Expires.	Remarks
97	June 26, 1912	Elder Paving and Contracting Company	Fortieth street	E. C. L. Roland avenue	W. C. L. University Parkway	Completed August 20, 1913	August 12, 1918.	
98	June 21, 1912.	F. E. Schneider Paving Company	Newington avenue	E. B. L. Park avenue	W. B. L. Mount Royal avenue	Completed January 6, 1913	January 10, 1918.	
101	September 19, 1912	F. E. Schneider Paving Company	Bentalou street	S. B. L. North avenue	N. B. L. Presbury street	Completed April 3, 1913	August 12, 1918.	
101	September 19, 1912.	F. E. Schneider Paving Company	Longwood street	S. B. L. North avenue	N. B. L. Westwood avenue	Completed July 7, 1913.	August 12, 1918	
102	September 10, 1912	P. Flanigan & Sons.	Calvert street	N. C. L. North avenue	S. C. L. Twentieth street	Completed January 9, 1913	March 6, 1918	
103	October 9, 1912	P. Flanigan & Sons	Twentieth street	E. B. L. Kennedy avenue	W. B. L. Aisquith street	Completed September 13, 1913	September 25, 1918.	
103	October 9, 1912	P. Flanigan & Sons	Berry street	E. C. L. Elm avenue	W. C. L. Chestnut avenue	Completed January 9, 1913	February 26, 1918	
103	October 9, 1912	P. Flanigan & Sons	Mason alley	N. B. L. Ducatel street	S. B. L. Whitelock street	Completed August 16, 1913	September 25, 1918	
104	November 14, 1912.	Elder Paving and Contracting Company	Twenty-ninth street	W. B. L. Huntingdon avenue	W. B. L. Hampden avenue	Completed May 13, 1913	June 14, 1918.	
105	November 14, 1912	Elder Paving and Contracting Company	Thirty-fourth street	W. B. L. Chestnut avenue	W. B. L. Elm avenue	Completed May 3, 1913.	August 12, 1918	
105	November 14, 1912	Elder Paving and Contracting Company	Twenty-eighth street	W. B. L. Huntingdon avenue	E. B. L. Hampden avenue	Completed January 1, 1913	February 26, 1918.	
105	November 14, 1912	Elder Paving and Contracting Company	Twenty-seventh street	E. B. L. Calvert street	W. B. L. Guilford avenue	Completed May 9, 1913	August 12, 1918	
105	November 14, 1912	Elder Paving and Contracting Company	Twenty-sixth street	E. B. L. Calvert street	W. B. L. Guilford avenue	Completed May 9, 1913	August 12, 1918	
105	November 14, 1912.	Elder Paving and Contracting Company	Hampden avenue	S. B. L. Twenty-seventh street	S. B. L. Twenty-ninth street	Completed January 2, 1913	February 26, 1918.	
105	November 14, 1912	Elder Paving and Contracting Company	Oak street	N. B. L. Twenty-sixth street	N. B. L. Twenty-seventh street	Completed May 1, 1913	August 12 1918	
105	November 14, 1912	Elder Paving and Contracting Company	Chester street	N. B. L. North avenue	Clifton Park	Completed July 3, 1913	August 12 1918	
105	November 14, 1912	Elder Paving and Contracting Company	Malakoff street	E. B. L. Washington street	W. B. L. Chester street	Completed July 3, 1913	August 12 1918	
106	June 2, 1913	P. Flanigan & Sons	Westwood avenue	W. B. L. Poplar Grove street	E. B. L. Hilton street	90 per cent. completed.	November 17, 1918.	Under guaranty from Longwood street to Hilton street only. First 1913 contract.
107	April 29, 1913	P. Flanigan & Sons	Oak street	N. C. L. University Parkway	S. B. L. Mallory lane	Completed August 30, 1913	September 27, 1918	
108	June 5 1913	Pen-Mar Contracting Company	Smallwood street	N. B. L. Walbrook avenue	N. B. L. Clifton avenue	Not started		
108	June 5 1913	Pen-Mar Contracting Company	Clifton avenue	E. B. L. Smallwood street	W. B. L. first alley east of McKean	10 per cent. completed		
110	May 30 1913	Eastern Paving Company	Augusta avenue	N. B. L. Frederick road	S. C. L. Old Frederick road	Completed November 18, 1913	December 19, 1918	
111	June 5, 1913	Pen-Mar Contracting Company	Fayette street	W. B. L. Catherine street	W. B. L. Shipley street	Completed July 30, 1913	December 19, 1918	
111	June 5, 1913	Pen-Mar Contracting Company	Fairmount avenue	W. B. L. Catherine street	E. B. L. Shipley street	Completed July 31, 1913	December 19, 1918.	
111	June 5, 1913	Pen-Mar Contracting Company	Catherine street	N. B. L. Baltimore street	N. B. L. Fayette street	Completed November 26, 1913	December 19, 1918	
111	June 5, 1913	Pen-Mar Contracting Company	Shipley street	N. B. L. Baltimore street	S. B. L. Fayette street	Completed August 8, 1913	December 19, 1918.	
112	June 19, 1913	J. H. Cranford Construction Company	Hilton street	S. B. L. Morris avenue	N. B. L. Windsor avenue	Completed November 6, 1913	November 18, 1918	
113	June 19, 1913	J. H. Cranford Construction Company	Forest Park avenue	W. B. L. Garrison avenue	Western city line	Completed December 3, 1913	December 11, 1918.	
113	June 19 1913	J. H. Cranford Construction Company	Kathland avenue	N. B. L. Oakfield avenue	Western city line	Completed November 27, 1913	December 11, 1918.	
114	June 19 1913	J. H. Cranford Construction Company	Cleveland avenue	N. B. L. Garrison avenue	S. B. L. Liberty Heights avenue	Completed October 20, 1913	October 20, 1918.	
114	June 19, 1913	J. H. Cranford Construction Company	Callaway avenue	N. B. L. Garrison avenue	S. B. L. Liberty Heights avenue	Not started		
115	June 13, 1913	P. Flanigan & Sons	Bernard street	N. B. L. Twenty-sixth street	S. B. L. Thirtieth street	Completed August 30, 1913	September 25, 1918	
116	June 19, 1913	J. H. Cranford Construction Company	Dukeland street	N. C. L. North avenue	N. B. L. Windsor avenue	30 per cent. completed		
118	June 4 1913	Freck & Allen	Hilton street	S. C. L. Edmondson avenue	N. B. L. Frederick road	50 per cent. completed		
119	June 20, 1913	Thomas Mullan	Twenty-seventh street	W. B. L. Huntingdon avenue	E. B. L. Sisson street	Completed September 27, 1913	October 26, 1918	
120	June 21 1913	Baltimore Asphalt Block and Tile Company.	Cedar avenue	N. B. L. Thirty-third street	N. B. L. Carwell avenue	Not started		
120	June 21, 1913	Baltimore Asphalt Block and Tile Company.	Carwell avenue	E. B. L. Chestnut avenue	W. B. L. Cedar avenue	Not started		
120	June 21, 1913	Baltimore Asphalt Block and Tile Company	Thirty-sixth street	E. B. L. Chestnut avenue	W. B. L. Cedar avenue	Not started		
120	June 21 1913	Baltimore Asphalt Block and Tile Company	Thirty-fourth street	E. B. L. Cedar avenue	W. B. L. Dulin avenue	Not started		
120	June 21 1913.	Baltimore Asphalt Block and Tile Company.	Dulin street	N. B. L. Thirty-third street	N. B. L. Thirty-fourth street	Not started		
121	July 14, 1913	Baltimore Asphalt Block and Tile Company.	Guilford avenue	N. B. L. Twenty-seventh street	S. B. L. Thirty-first street	Completed October 31, 1913	November 1, 1918	
121	July 14 1913	Baltimore Asphalt Block and Tile Company.	Twenty-eighth street	E. B. L. Calvert street	W. B. L. Guilford avenue	Completed October 28 1913	November 1, 1918	
121	July 14 1913	Baltimore Asphalt Block and Tile Company.	Thirtieth street	E. B. L. Calvert street	W. B. L. Guilford avenue	Completed October 29, 1913	November 1, 1918	
122	October 27 1913	American Paving Company	Thirty-third street	E. C. L. St. Paul street	W. C. L. Hillen road	10 per cent. completed		
123	July 22 1913	Baltimore Asphalt Block and Tile Company.	Forest Park avenue	E. B. L. Callaway avenue	W. B. L. Grantley street	10 per cent completed.		
123	July 22 1913	Baltimore Asphalt Block and Tile Company	Springdale avenue	E. B. L. Callaway avenue	W. B. L. Grantley street	Completed September 30, 1913	December 11, 1913.	
123	July 22 1913	Baltimore Asphalt Block and Tile Company	Fairview avenue	E. B. L. Garrison avenue	W. B. L. Grantley street	Completed October 17, 1913	December 11, 1918.	
123	July 22, 1913	Baltimore Asphalt Block and Tile Company	Grantley street	N. B. L. Fairview avenue	S. B. L. Forest Park avenue	Completed December 11, 1913	December 11, 1918.	
124	September 3, 1913	Baltimore Asphalt Block and Tile Company	Thomas avenue	S. B. L. North avenue	N. B. L. Baker street	Completed December 30, 1913		
124	September 3, 1913	Baltimore Asphalt Block and Tile Company	Warwick avenue	S. B. L. North avenue	N. B. L. Baker street	99 per cent. completed		Under guaranty from North avenue to Westwood avenue only.
124	September 3 1913	Baltimore Asphalt Block and Tile Company	Arunah avenue	W. B. L. Bentalou street	W. B. L. Warwick avenue	Completed November 25, 1913		
124	September 3, 1913	Baltimore Asphalt Block and Tile Company	Warwick avenue	N. B. L. Edmondson avenue	S. B. L. Arunah avenue	Completed November 25, 1913		
124	September 3 1913	Baltimore Asphalt Block and Tile Company	Wheeler avenue	N. B. L. Edmondson avenue	S. B. L. Arunah avenue	Completed November 24, 1913		
125	July 30, 1913	Warner-Quinlan Company.	Hickory avenue	N. B. L. Thirty-sixth street	N. B. L. Thirty-eighth street	Completed November 13, 1913.	December 11, 1918.	
125	July 30 1913	Warner-Quinlan Company	Thirty-eighth street	E. B. L. Hickory avenue	W. B. L. Elm avenue	Completed November 15, 1913	December 11, 1918.	
126	September 18, 1913.	American Paving Company.	Ellamont street	S. B. L. North avenue	N. B. L. Baker street	85 per cent. completed		
126	September 18, 1913	American Paving Company.	Rosedale street	S. B. L. North avenue	N. B. L. Baker street	90 per cent completed		Under guaranty from Baker street to Presbury street and from Westwood avenue to North avenue.
126	September 18, 1913	American Paving Company.	Braddish avenue	S. B. L. North avenue	N. B. L. Baker street	70 per cent. completed		
126	September 18, 1913	American Paving Company.	Whitmore avenue	S. B. L. North avenue	N. B. L. Westwood avenue	Completed December 29, 1913		
126	September 18, 1913	American Paving Company	Smallwood street	S. B. L. Westwood avenue	S. B. L. Presbury street	Completed November 20, 1913.		
126	September 18 1913	American Paving Company	Presbury street	E. B. L. Ellamont street	W. B. L. Windsor Mill road	90 per cent. completed		
126	September 18 1913	American Paving Company	Presbury street	W. B. L. Smallwood street	E. B. L. Warwick avenue	Completed December 10, 1913.		
126	September 18 1913	American Paving Company	Westwood avenue	W. B. L. Smallwood street	E. B. L. Warwick avenue	Completed December 10, 1913		
127	September 29, 1913	American Paving Company	Windsor avenue	W. B. L. Dukeland street	E. B. L. Ellamont street	30 per cent. completed		
127	September 29 1913	American Paving Company	Poplar Grove street	N. B. L. Clifton avenue	S. B. L. Windsor avenue	Not started		
127	September 29 1913	American Paving Company	Longwood street	N. B. L. Clifton avenue	S. B. L. Windsor avenue	Not started		
127	September 29 1913	American Paving Company	Rosedale street	S. B. L. Clifton avenue	S. B. L. Windsor avenue	Not started		
127	September 29 1913	American Paving Company	Clifton avenue	W. B. L. Hilton street	E. B. L. Denison street	Not started		
128	October 2 1913	American Paving Company	Greenway	E. C. L. Charles street	W. C. L. St. Paul street	Completed December 20, 1913	December 20, 1918.	

TABLE No. 3—KINDS OF MATERIAL LAID DURING 1913

BITUMINOUS CONCRETE

Contract Number	Streets.	From.	To	Year Laid.	Square Yards.	Base	Name of Asphalt.	Thickness Wearing Surface.	Lineal Feet Actual Length.	Length in Miles Based on Street 30 Feet Wide.
124	Arunah avenue	W. B. L. Bentalou street	W. B. L. Warwick avenue	1913	4,114	6-inch	Montezuma Mexican	2-inch	876	.240
110	Augusta avenue	N. B. L. Frederick road	S. B. L. Old Frederick road	1913	6,850	6-inch	Aztec	2-inch	1,563	.389
101	Bentalou street	S. B. L. North avenue	N. B. L. Presbury street	1913	755	4-inch	Bermudez	2-inch	170	.042
115	Bernard street	N. B. L. Twenty-sixth street	S. B. L. Twenty-seventh street	1913	3,143	6-inch	Standard Mexican	2-inch	361	.179
115	Bernard street	N. B. L. Twenty-seventh street.	S. B. L. Twenty-eighth street	1913		6-inch	Standard Mexican	2-inch	314	
115	Bernard street	N. B. L. Twenty-eighth street.	S. B. L. Twenty-ninth street	1913		6-inch	Standard Mexican	2-inch	332	
115	Bernard street	N. B. L. Twenty-ninth street	S. B. L. Thirtieth street.	1913		6-inch	Standard Mexican	2-inch	331	
111	Catherine street	N. B. L. Baltimore street	N. B. L. Fayette street	1913	1,478	6-inch	Montezuma Mexican	2-inch	435	.084
105	Chester street	N. B. L. North avenue	S. B. L. Clifton Park	1913	2,717	6-inch	Standard Mexican	2-inch	605	.154
114	Cleveland avenue	N. B. L. Springdale avenue	S. B. L. Forest Park avenue	1913	1,924	6-inch	Montezuma Mexican	2-inch	621	.110
114	Cleveland avenue	N. B. L. Forest Park avenue	S. B. L. Liberty Heights avenue	1913		6-inch	Montezuma Mexican	2-inch		
111	Fairmount avenue	W. B. L. Catherine street	E. B. L. Shipley street	1913	1,614	6-inch	California and Bermudez	2-inch	526	.092
123	Fairview avenue	E. B. L. Garrison avenue	W. B. L. Callaway avenue.	1913	2,604	6-inch	Montezuma Mexican	2-inch	938	.151
123	Fairview avenue	E. B. L. Callaway avenue	W. B. L. Grantley street	1913		6-inch	Montezuma Mexican	2-inch		
111	Fayette street	W. B. L. Catherine street	W. B. L. Shipley street	1913	2,115	6-inch	California	2-inch	667	.120
113	Forest Park avenue	W. B. L. Garrison avenue	E. C. L. Oakfield avenue	1913	4,899	6-inch	Montezuma Mexican	2-inch	1,687	.278
113	Forest Park avenue	E. C. L. Oakfield avenue	Western city limits	1913		6-inch	Montezuma Mexican	2-inch		
123	Grantley street	N. B. L. Springdale avenue	S. B. L. Fairview avenue	1913	1,120	6-inch	Montezuma Mexican	2-inch	415	.063
121	Guilford avenue	N. B. L. Twenty-seventh street	S. B. L. Twenty-ninth street	1913	7,037	6-inch	California and Montezuma	2-inch	1,740	.400
121	Guilford avenue	N. B. L. Twenty-ninth street	S. B. L. Thirty-first street	1913		6-inch	California and Montezuma	2-inch		
105	Hampden avenue	S. B. L. Twenty-seventh street.	S. B. L. Twenty-ninth street.	1913	1,254	4-inch	Standard Mexican	2-inch	370	.072
125	Hickory avenue	N. B. L. Thirty-sixth street	S. B. L. Thirty-seventh street.	1913	3,720	6-inch	Montezuma Mexican	2-inch	1,093	.210
125	Hickory avenue	N. B. L. Thirty-seventh street	N. B. L. Thirty-eighth street	1913		6-inch	Montezuma Mexican	2-inch		
113	Kathland avenue	W. B. L. Oakfield avenue	Western city limits	1913	1,073	6-inch	Montezuma Mexican	2-inch	309	.061
101	Longwood street	S. B. L. North avenue	N. B. L. Westwood avenue	1913	1,144	6-inch	California	2-inch	273	.065
105	Malakoff street	E. B. L. Washington street.	W. B. L. Chester street.	1913	1,048	6-inch	Standard Mexican	2-inch	424	.060
98	Newington avenue	E. B. L. Park avenue	W. B. L. Mount Royal avenue	1913	1,351	4-inch	Bermudez	2-inch	303	.077
105	Oak street	N. B. L. Twenty-sixth street	N. B. L. Twenty-seventh street.	1913	2,042	4-inch	Standard Mexican	2-inch	462	.116
107	Oak street	N. B. L. University Parkway.	S. B. L. Mallory lane	1913	4,796	6-inch	Standard Mexican	2-inch	1,504	.270
111	Shipley street	N. B. L. Baltimore street	S. B. L. Fayette street	1913	900	6-inch	California	2-inch	414	.051
123	Springdale avenue	E. B. L. Callaway avenue	W. B. L. Grantley street	1913	1,819	6-inch	Montezuma Mexican	2-inch	655	.103
124	Thomas avenue	S. B. L. North avenue	N. B. L. Baker street	1913	3,400	6-inch	Montezuma Mexican	2-inch	1,071	.193
105	Twenty-sixth street	E. B. L. Calvert street	W. B. L. Guilford avenue	1913	1,340	4-inch	Standard Mexican	2-inch	327	.077
105	Twenty-seventh street	E. B. L. Calvert street	W. B. L. Guilford avenue	1913	1,333	4-inch	Standard Mexican	2-inch	328	.077
105	Twenty-eighth street.	W. B. L. Huntingdon avenue	E. B. L. Hampden avenue	1913	1,158	4-inch	Texaco	2-inch	320	.065
121	Twenty-eighth street.	E. B. L. Calvert street	W. B. L. Guilford avenue	1913	1,351	6-inch	California and Montezuma	2-inch	327	.077
121	Thirtieth street	E. B. L. Calvert street	W. B. L. Guilford avenue	1913	1,409	6-inch	California and Montezuma	2-inch	321	.080
105	Thirty-fourth street	W. B. L. Chestnut avenue	W. B. L. Elm avenue	1913	1,912	4-inch	Standard Mexican	2-inch	510	.108
125	Thirty-eighth street	E. B. L. Hickory avenue	W. B. L. Roland avenue	1913	1,937	6-inch	Montezuma Mexican	2-inch	785	.110
125	Thirty-eighth street	E. C. L. Roland avenue	W. B. L. Elm avenue	1913		6-inch	Montezuma Mexican	2-inch		
94	Warwick avenue	N. B. L. Edmondson avenue	S. B. L. Arunah avenue	1913	916	6-inch	Montezuma Mexican	2-inch	201	.052
124	Warwick avenue	N. B. L. Baker street	S. B. L. Westwood avenue	1913	3,340	6-inch	Montezuma Mexican	2-inch	733	.190
106	Westwood avenue	W. B. L. Longwood street	E. B. L. Hilton street	1913	4,664	6-inch	Standard Mexican	2-inch	1,301	.265
124	Wheeler avenue	N. C. L. Edmondson avenue	S. B. L. Arunah avenue	1913	995	6-inch	Montezuma Mexican	2-inch	219	.056
			Total		83,272				23,927 4.531 Miles	4.731

SHEET ASPHALT

Contract Number	Streets	From	To	Year Laid.	Square Yards.	Base	Name of Asphalt.	Thickness Topping.	Thickness Binder.	Actual Length.	Length in Miles Based on Street 30 Feet Wide.
102	Calvert street	N. C. L. North avenue.	S. C. L. Twentieth street	1913	1,373	4-inch	California	2-inch	1½-inch	345	.078
97	Fortieth street	E. C. L. Roland avenue	W. C. L. University Parkway	1913	5,400	6-inch	Standard Mexican and Texaco	2-inch	1½-inch	1,373	.307
128	Greenway	E. B. L. Hopkins Circle.	W. C. L. St. Paul street	1913	2,803	6-inch	Standard Mexican.	2-inch	1½-inch	706	.160
112	Hilton street	N. B. L. Morris avenue	S. C. L. Windsor Mill road	1913	5,975	6-inch	Montezuma Mexican	2-inch	1½-inch	1,627	.339
112	Hilton street	S. C. L. Windsor Mill road	S. B. L. Windsor avenue	1913		6-inch	Montezuma Mexican	2-inch	1½-inch		
126	Presbury street	E. B. L. Warwick avenue	W. B. L. Smallwood street	1913	4,423	6-inch	Standard Mexican	1½-inch	1½-inch	1,204	.251
126	Rosedale street	N. B. L. Baker street	S. B. L. Presbury street	1913	2,628	6-inch	Standard Mexican	1½-inch	1½-inch	687	.150
126	Rosedale street	N. B. L. Westwood avenue	S. B. L. North avenue	1913		6-inch	Standard Mexican.	1½-inch	1½-inch		
126	Smallwood street	S. B. L. Westwood avenue	N. B. L. Presbury street	1913	1,100	6-inch	Standard Mexican	1½-inch	1½-inch	274	.062
126	Westwood avenue	E. B. L. Warwick avenue	W. B. L. Bentalou street	1913	5,000	6-inch	Standard Mexican	1½-inch	1½-inch	1,192	.284
126	Westwood avenue	E. B. L. Bentalou street	W. B. L. Smallwood street.	1913		6-inch	Standard Mexican	1½-inch	1½-inch		
126	Whitmore avenue	S. B. L. North avenue	N. B. L. Westwood avenue	1913	1,006	6-inch	Standard Mexican.	1½-inch	1½-inch	321	.057
			Total		20,708					7,720 1.464 Miles	1.688

VITRIFIED BRICK

Contract Number	Streets	From	To	Year Laid.	Square Yards.	Base.	Name of Block.	Filler.	Lineal Feet Actual Length.	Length in Miles Based on Street 30 Feet Wide.
103	Berry street	E. C. L. Elm avenue	W. C. L. Chestnut avenue	1913	703	6-inch	Medal D	Cement	484	.040
103	Mason alley	N. B. L. Ducatel street	S. B. L. Whitelock street	1913	1,286	6-inch	Tuna Valley.	Cement	596	.073
103	Twentieth street	E. B. L. Kennedy avenue	W. B. L. Asquith street	1913	1,795	6-inch	Metropolitan—Tuna Valley	Cement	387	.102
110	Twenty-seventh street	W. B. L. Huntingdon avenue	E. B. L. Hampden avenue	1913	2,771	6-inch	Tuna Valley.	Cement	321	.157
110	Twenty-seventh street	W. B. L. Hampden avenue	E. B. L. Sisson street	1913		6-inch	Tuna Valley	Cement	370	
104	Twenty-third street	W. B. L. Huntingdon avenue	W. B. L. Hampden avenue	1913	1,645	6-inch	Sterling	Cement	353	.094
			Total		8,200				2,511 0.475 Miles	0.466

TABLE No. 4—UNFINISHED WORK ON CONTRACTS LET DURING 1913, TO BE COMPLETED DURING 1914.

Contract Number.	Street.	From.	To.	Width Between Curbs.	Material.	Feet, Actual Length.	Miles Length, 30 Feet Wide.	Paving, Square Yards.	Grading, Cubic Yards.
106	Westwood avenue	W. B. L. Poplar Grove street	W. B. L. Longwood street	32	Bituminous concrete	507	.102	1,800	....
108	Clifton avenue	E. B. L. Smallwood street	First alley east of McKean avenue	39.6	Vitrified brick	1,604	.435	7,650	1,406
108	Smallwood street	N. B. L. Walbrook avenue	N. B. L. Clifton avenue	39.6	Vitrified brick	386	.050	887	501
114	Callaway avenue	N. B. L. Garrison avenue	S. B. L. Liberty Heights avenue	30.0	Bituminous concrete	1,279	.239	4,203	535
116	Dukeland street	N. C. L. North avenue	N. B. L. Windsor avenue	40	Sheet asphalt	1,178	.292	5,149	4,102
118	Hilton street	S. C. L. Edmondson avenue	N. B. L. Frederick road	40	Sheet asphalt	4,752	1.157	20,368	....
120	Cedar avenue	N. B. L. Thirty-third street	N. B. L. Carwell avenue	36	Bituminous concrete	1,828	.358	6,296	1,571
120	Carwell avenue	E. B. L. Chestnut avenue	W. B. L. Cedar avenue	36	Bituminous concrete	329	.070	1,232	1,016
120	Thirty-sixth street	E. B. L. Chestnut avenue	W. B. L. Cedar avenue	36	Bituminous concrete	314	.067	1,179	1,705
120	Thirty-fourth street	E. B. L. Cedar avenue	W. B. L. Dulin avenue	36	Bituminous concrete	304	.064	1,127	504
120	Dulin avenue	N. B. L. Thirty-third street	N. B. L. Thirty-fourth street	36	Bituminous concrete	592	.132	2,330	840
122	Thirty-third street	E. C. L. St. Paul street	W. C. L. Hillen road	2(24)	Sheet asphalt	7,526	2.363	41,597	75,191
123	Forest Park avenue	E. B. L. Callaway avenue	W. B. L. Grantley street	30	Bituminous concrete	660	.104	1,835	452
123	Grantley street	N. B. L. Springdale avenue	N. B. L. Forest Park avenue	30	Bituminous concrete	366	.070	1,213	....
124	Warwick avenue	S. B. L. North avenue	S. B. L. Westwood avenue	39.6	Bituminous concrete	338	.081	1,437	....
126	Ellamont street	S. B. L. North avenue	N. B. L. Westwood avenue	32	Sheet asphalt	273	.210	3,720	....
		S. B. L. Westwood avenue	S. B. L. Presbury street			340	....	....	....
126	Rosedale street	S. B. L. Westwood avenue	N. B. L. Presbury street	32	Sheet asphalt	273	.058	1,030	....
126	Braddish avenue	S. B. L. North avenue	N. B. L. Baker street	24	Sheet asphalt	1,071	.166	2,926	....
126	Presbury street	W. B. L. Rosedale street	E. B. L. Ellamont street	30	Sheet asphalt	293	.050	877	....
127	Windsor avenue	W. B. L. Dukeland street	E. B. L. Ellamont street	32	Sheet asphalt	1,897	.378	6,647	13,622
127	Poplar Grove street	N. B. L. Clifton avenue	S. B. L. Windsor avenue	40	Sheet asphalt	316	.076	1,334	379
127	Longwood street	N. B. L. Clifton avenue	S. B. L. Windsor avenue	32	Sheet asphalt	319	.050	1,049	310
127	Rosedale street	S. B. L. Clifton avenue	S. B. L. Windsor avenue	32	Sheet asphalt	384	.079	1,397	306
127	Clifton avenue	W. B. L. Hilton street	E. B. L. Denison street	32	Sheet asphalt	437	.075	1,328	85
					Totals	27,566	6.735	118,611	102,525

TABLE No. 5—TOTAL PAVING UNDER ANNEX LOAN ACT MAY 3, 1906, TO DECEMBER 31, 1913.

[illegible]	Street	From	To	Concrete Curb, Lineal Feet	Combination Concrete Curb and Gutter, Lineal Feet	Stone Curb Lineal Feet	Curb Reset and Redressed Lineal Feet	Headers Lineal Feet	Gutter-Stone, Lineal Feet	Vitrified Brick, Square Yards	Granite Blocks Square Yards	Bithulithic Square Yards	Sheet Asphalt Square Yards	Asphalt Block, Square Yards	Wood Block Square Yards	Bituminous Concrete Square Yards	Macadam Square Yards	Vitrified Brick in Railway Tracks, Square Yards	Vitrified Brick Gutters and Alley Intersections, Square Yards	Cobble, Square Yards	Grading Cubic Yards	Former Condition	Final Estimate	Total Yardage	Miles of Street Thirty Feet Wide	Contractor

Street	From	To	Length	Old pavement	Contractor	Remarks
[illegible]	[illegible]	S. L. L. [illegible] street	[illegible]	[illegible]	William M. Elder Paving and Contracting Company	
T[illegible]	[illegible]	N. P. L. Twenty-seventh street...	[illegible]	Unpaved	William M. Elder Paving and Contracting Company	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	William M. Elder Paving and Contracting Company	
Oak street	[illegible]	[illegible] street	[illegible]	[illegible]	William M. Elder Paving and Contracting Company	
[illegible]	[illegible]	[illegible] street	231 8	[illegible]	P. Flanigan & Sons	
[illegible]	W. B. L. Poplar [illegible]	[illegible]	[illegible]	Unpaved	P. Flanigan & Sons	[illegible]
[illegible]	[illegible]	[illegible]		Unpaved	F. J. Schneider Paving Company	Not started
[illegible]	[illegible]	[illegible] McKee	670 0	Unpaved	F. J. Schneider Paving Company	
[illegible]	[illegible]	[illegible] road	[illegible]	Macadam	[illegible] Paving Company	Under construction
[illegible]	[illegible]	[illegible] street	[illegible]	[illegible]	Penn-Mar Construction Company	[illegible]
[illegible]	[illegible]	[illegible] street	[illegible]	Cobble	Penn-Mar Construction Company	[illegible]
[illegible]	[illegible]	[illegible] street	[illegible]	[illegible]	Penn-Mar Construction Company	[illegible]
[illegible]	[illegible]	[illegible] street	[illegible]	Cobble [illegible] unpaved	Penn-Mar Construction Company	[illegible]
[illegible]	[illegible]	[illegible] avenue	3,174 2	Macadam	I. H. Crawford Construction Company	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Macadam	I. H. Crawford Construction Company	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Unpaved .	I. H. Crawford Construction Company	[illegible]
[illegible]	[illegible]	[illegible]	1,242 0	[illegible]	I. H. Crawford Construction Company	[illegible]
[illegible]	[illegible]	[illegible]		Unpaved	I. H. Crawford Construction Company	[illegible]
[illegible]	[illegible]	[illegible] street	[illegible]	[illegible]	P. Flanigan & Sons	[illegible]
[illegible]	[illegible]	[illegible] avenue	1,300 0	Unpaved	I. H. Crawford Construction Company	Under construction
[illegible]	[illegible]	[illegible] road		[illegible]	Frock & Allen	[illegible]
[illegible]	[illegible]	[illegible] street	[illegible]	[illegible]	Thomas Mullan..	[illegible]
[illegible]	S. B. L. Thirty-third street	[illegible] avenue		[illegible]	Baltimore Asphalt Block and Tile Company	Not started
[illegible]	[illegible] Chestnut avenue	[illegible] avenue		[illegible]	Baltimore Asphalt Block and Tile Company	Not started
[illegible]	[illegible] Chestnut avenue	[illegible] avenue		[illegible]	Baltimore Asphalt Block and Tile Company	Not started
[illegible]	[illegible]	[illegible] avenue		[illegible]	Baltimore Asphalt Block and Tile Company	Not started
[illegible]	[illegible] Thirty-third [illegible]	[illegible] street		Unpaved	Baltimore Asphalt Block and Tile Company	Not started
[illegible]	[illegible] Twenty-[illegible] street	[illegible] street	2,497 8	Unpaved .	Baltimore Asphalt Block and Tile Company	[illegible]
[illegible]	[illegible] street	[illegible] avenue	[illegible]	Unpaved	Baltimore Asphalt Block and Tile Company	[illegible]
[illegible]	[illegible] street	[illegible] avenue	332 7	Unpaved .	Baltimore Asphalt Block and Tile Company	[illegible]
[illegible]	[illegible] street	[illegible]		Unpaved .	American Paving Company	Under construction
[illegible]	[illegible] avenue	[illegible] street		Unpaved.	Baltimore Asphalt Block and Tile Company	Not started
[illegible]	[illegible] avenue	[illegible] street	1,310 0	Unpaved .	Baltimore Asphalt Block and Tile Company	Approximate estimate
[illegible]	[illegible]	[illegible] street	[illegible]	Unpaved	Baltimore Asphalt Block and Tile Company	Approximate estimate
[illegible]	[illegible] Park avenue	[illegible] avenue	660 0	Unpaved	Baltimore Asphalt Block and Tile Company	Under construction
[illegible]	[illegible]	[illegible] street	2,000 0	Unpaved	Baltimore Asphalt Block and Tile Company	[illegible]
[illegible]	[illegible]	[illegible] street	2,000 0	[illegible]	Baltimore Asphalt Block and Tile Company	Under construction
Warwick avenue	[illegible]	W. [illegible] L. Warwick avenue	[illegible]	Unpaved	Baltimore Asphalt Block and Tile Company	Completed
[illegible]	[illegible] avenue	[illegible] Arunah avenue .	[illegible]	[illegible]	Baltimore Asphalt Block and Tile Company	[illegible]
[illegible]	[illegible]	[illegible] Arunah avenue...	[illegible]	[illegible]	Baltimore Asphalt Block and Tile Company	[illegible]
[illegible]	[illegible] street	[illegible] street	[illegible]	[illegible]	Warner-Quinlan [illegible] Company	[illegible]
[illegible]	E. B. L. Hickory avenue...	[illegible]	[illegible]	Unpaved....	Warner-Quinlan [illegible] Company	[illegible]
[illegible]	[illegible]	[illegible] street	2,100 0	Old [illegible]	American Paving and Contracting Company	Under construction
[illegible]	[illegible] avenue	[illegible] street	1,700 0	Old [illegible]	American Paving and Contracting Company	Under construction
[illegible]	[illegible] avenue	[illegible] street	2,200 0	Unpaved ...	American Paving and Contracting Company	Under construction
[illegible]	[illegible] avenue	[illegible] avenue	650 0	Unpaved	American Paving and Contracting Company	[illegible]
Whitmore avenue . .	[illegible]	[illegible] bury street ..	[illegible]	Unpaved	American Paving and Contracting Company	[illegible]
[illegible]	[illegible] street	[illegible] McL[illegible] road	800 0	Unpaved .	American Paving and Contracting Company	[illegible]
[illegible]	[illegible] Warwick avenue	[illegible] street	2,400 0	Unpaved	American Paving and Contracting Company	[illegible]
[illegible]	[illegible] Warwick avenue	[illegible] street	[illegible]	Unpaved	American Paving and Contracting Company	Completed
[illegible]	[illegible] street	[illegible] street		Unpaved	American Paving and Contracting Company	[illegible]
[illegible]	[illegible] avenue	[illegible] avenue		Unpaved .	American Paving and Contracting Company	Not started
[illegible]	[illegible] avenue	[illegible] avenue		Unpaved .	American Paving and Contracting Company	Not started
[illegible]	[illegible] avenue	[illegible] avenue		Unpaved	American Paving and Contracting Company .	Not started
[illegible]	[illegible]	[illegible] street		Unpaved	American Paving and Contracting Company .	Not started
[illegible]	[illegible] avenue	[illegible] street		Unpaved	American Paving and Contracting Company	[illegible]
			118,793 3			

* Total yardage [illegible]

ANNUAL REPORT

OF THE

Collector of Water Rents and Licenses

1797

To the Mayor and City Council of Baltimore
for the Fiscal Year Ended December 31

1913

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER

1914

REPORT

DEPARTMENT OF FINANCE,
SUB-DEPARTMENT
COLLECTOR OF WATER RENTS AND LICENSES,
CITY HALL,
BALTIMORE, January 1, 1914.

To the Honorable, the Mayor and City Council of Baltimore.

GENTLEMEN:

I respectfully submit my Annual Report showing the collections for water rents and licenses for 1913 by the following statements for your consideration:

The receipts for water rents, meter rates, plumbing bills, etc., for the year ending December 31, 1913, amount to	$1,483,508 83	
Less amount returned for payments in error	3,958 43	
		$1,479,550 40
While for the year 1912 they were		1,442,740 71
Showing an increase for the year 1913 of		$36,809 69

The amount of money refunded during the year 1913 exceeded that of 1912 by $2,179.84. Of this amount, $1,435.20 was a refund by direction of the Water Board due to an error of that department in the reading of a meter.

There was an increase in the receipts from meter accounts of $57,490.27 and on plumbing bills of $23,741.94. The collection from flat rates amounted to $39,782.80 less than last year. The increase in the meter receipts and the decrease in the flat rate accounts is partly explained by the transfer of a number of the latter accounts to the former. The increase in our collections over the Department's estimate made it unnecessary to force the collection of the flat rate accounts.

In addition to the collections ($1,479,550.40) made by the Department on account of water rents, etc., the Water Engineer turned into the City Comptroller $9,494.25 for sales of old material, etc., making the total net collections $1,489,044.65, and showing a surplus of receipts over disbursements of $382,787.60.

The amount expended by the office of Collector of Water Rents and Licenses, including $415,000 interest paid on water loans, was $468,485.53, and the amount expended by the Water Engineer's Department was $637,771.52, making a total of $1,106,257.05.

In Statement "D" the abatements made during the year 1913 amount to $12,096.81 as against $14,524.43 in 1912. These abatements are largely attributable to owners of vacant property declaring vacancy thereon by availing themselves of the payment of the fee of $1 for turning the water off and on; also by action of the Water Board in the reduction of rents and by change from flat to meter rate. The latter two, it is apparent, will be materially reduced hereafter through the action taken by the Board of Estimates in directing that water revenue estimated for the Department should not be diminished during the current year.

Statement "E" shows 3,256 new supplies put in, 1,022 of which replaced joint supplies. In 1912, 2,982 were new supplies and 680 replaced joint supplies.

As explained in our 1912 report, most of these supplies were put in new property, upon which, however, the charge for water does not actually begin until the property is occupied.

In Statement "F" the item of plumbing bills remaining on the ledgers December 31, 1913, is $19,290.44, an increase of $2,861.90. About $4,000 of this amount is for work done during the month of December; the larger portion is due by city contractors engaged in the construction of sewers, etc. The amounts due by them are from time to time furnished the Sewerage Commission and the Comptroller's office, for the purpose of protecting the city, and the withholding of the amount from their estimates.

Whilst there were added 906 new accounts to the Department during the year, many more supplies were put in, but the Department will not derive revenue therefrom until the property is actually occupied. Our inspectors watch these closely.

Our revenue sheet for 1914 shows 1,166 bars specifically charged under the flat rate on our books. The records of the Court of Common Pleas shows 1,247 licenses actually issued to saloons. The explanation of this seeming discrepancy is that the balance are on meters.

The collections for general licenses, consisting of wagons and other vehicles, telegraph and telephone poles, theatres, moving pictures, entertainments, billiard, pool and bagatelle tables, bowling alleys, venders, etc., amounted in 1913 to $98,540.78, and in 1912 $91,184.71, *an increase* in 1913 of $7,356.07.

The ordinance approved December 10, 1912, making the annual license fee for venders of perishable goods from wagons $5 per annum, and from baskets $2 per annum, produced the sum of $8,632.25, as against $5,279.35 collected in six months of the year 1912 at the old charge of $25 and $15 per annum, respectively.

Under the provisions of the ordinance above referred to this Department *returned* the sum of $3,161.70 *during* the year 1913 on venders' licenses issued in 1912.

The collection for dog licenses in 1913 amounted to $22,833.71, as against $23,272.25 for 1912, showing a decrease of $438.54.

The establishment of moving-picture parlors has added quite a large amount to the receipts for entertainments.

There are now about 100 of these places in the city, and the number is ever on the increase. I might mention that with a view to public safety no license is issued to any place of amusement without a certificate of approval first being obtained from the office of the Inspector of Buildings.

Whilst the amount of revenue received from the exhibition of wild west shows and circuses was not large, it makes a change in our receipts annually to the extent of about $600, as they now seem to seek locations on vacant lots beyond the city limits.

The receipts from the tax of $2 per annum on all telegraph and telephone poles throughout the city amounted to $17,474, as against $18,002 in 1912. This decrease of $528, representing 264 less poles, would indicate that the extension of the conduit system is being availed of by those corporations, and it is to be expected that our receipts from this source will be diminished yearly.

I desire to call attention to the fact at this time that we are handicapped by reason of an insufficient number of ledger clerks, often finding it necessary so call upon our inspectors (whose duties require them to be on the street) to act in that capacity, and to wait upon the public to avoid unnecessary delay.

I regret to record the death of two of our ledger clerks during the year, viz.: Mr. Fred W. Lustnauer, who died last February, and Mr. James E. Burke, who died last August, both of whom were in the Department for a number of years and were faithful in the performance of their duties.

I desire to commend the diligence and efficiency of the employees of this Department and to say that they discharge their duties promptly and satisfactorily.

The accompanying tabulated statements set forth in detail the work accomplished.

A.—Collection of water rents	$1,483,508 83
B.—Expenditures	468,485 53
C.—Monthly receipts of water rents	1,483,508 83
D.—Abatements	12,096 81
E.—New supplies	32,662 00
F.—Balances remaining on ledgers December 31, 1913	189,317 41
G.—Revenue shown by ledgers January 1, 1914	1,509,872 25
H.—Receipts for licenses	121,374 49

All of which is respectfully submitted.

DANIEL J. LODEN,
Collector of Water Rents and Licenses.

STATEMENT A.

Collections Made for Water Department During the Year 1913.

	Dr.	Cr.
To water rents for 1913	$724,932 88	
To water rents for 1912	103,720 09	
To water rents for 1911	2,348 32	
To water rents for 1910	552 53	
To meter rents	569,669 69	
To plumbing bills	72,492 41	
To meter plumbing	7,099 52	
To interest on back water rents	1,899 89	
To turn-offs	280 50	
To vacancies	513 00	
By deposits with the City Register:		
January		$262,097 21
February		110,753 36
March		195,056 24
April		220,100 36
May		84,829 04
June		64,469 10
July		156,332 29
August		45,041 80
September		28,091 47
October		156,401 70
November		115,814 08
December		44,522 18
	$1,483,508 83	$1,483,508 83

STATEMENT B.

Expenditures During the Year 1913.

Appropriation Made by the Mayor and City Council:		
For interest on water loans	$415,000 00	
For salaries	30,220 00	
For sinking fund	22,500 00	
For expenses	2,055 00	
		$469,775 00
Amount expended for interest	$415,000 00	
Amount expended for salaries	29,836 67	
Amount expended for sinking fund	21,614 43	
Amount expended for expenses	2,034 43	
		468,485 53
Amount of Appropriation Unexpended (as follows)		$1,289 47
Sinking fund	$885 57	
Salaries	383 33	
Expense	20 57	
		1,289 47

STATEMENT C.

Receipts of the Collector of Water Rents and Licenses from Water Rents for the Year 1813.

	January	February	March	April
Water rents for 1913...	$120,148 53	$76,439 58	$173,614 80	$101,052 00
Water rents for 1912...	19,876 39	8,296 31	7,987 96	9,149 58
Water rents for 1911...	234 25	136 34	132 56	148 32
Water rents for 1910...	25 92	32 00	17 92	18 00
Meter rents............	116,675 43	18,723 33	6,744 09	102,269 32
Plumbing bills..........	4,274 43	5,955 97	5,605 64	6,096 83
Meter plumbing........	759,69	1,086 32	826 17	1,205 24
Int. on back water rents	16 57	49 51	84 10	142 07
Turn-offs...............	5 00	....	5 00	4 00
Vacancies..............	81 00	34 00	38 00	15 00
	$262,097 21	$110,753 36	$195,056 24	$220,100 36

	May	June	July	August
Water rents for 1913...	$39,730 18	$28,735 90	$22,934 89	$13,962 39
Water rents for 1912...	24,500 84	25,139 53	4,406 97	1,487 23
Water rents for 1911...	390 46	770 34	244 13	70 34
Water rents for 1910...	70 96	111 16	120 91	25 00
Meter rents............	15,157 54	2,630 53	123,001 64	22,590 56
Plumbing bills..........	4,013 74	5,301 51	4,842 21	6,313 67
Meter plumbing........	402 13	924 84	495 73	501 90
Int. on back water rents	519 19	695 29	168 31	57 71
Turn-offs...............	8 00	107 00	98 50	24 00
Vacancies..............	36 00	53 00	19 00	9 00
	$84,829 04	$64,469 10	$156,332 29	$45,041 80

STATEMENT C.—*Continued.*

	September	October	November	December
Water rents for 1913...	$16,864 46	$15,612 31	$84,753 29	$31,084 55
Water rents for 1912...	887 26	627 10	830 28	528 97
Water rents for 1911...	74 42	53 00	84 41	11 42
Water rents for 1910...	32 83	85 00	....	12 83
Meter rents............	2,022 14	130,047 85	22,824 43	6,982 83
Plumbing bills..........	7,978 80	9,428 78	7,004 02	5,676 81
Meter plumbing........	164 93	424 53	195 15	112 89
Int. on back water rents	42 63	46 13	48 50	29 88
Turn-offs...............	12 00	8 00	7 00	2 00
Vacancies..............	12 00	69 00	67 00	80 00
	$28,091 47	$156,401 70	$115,814 08	$44,522 18

Total water rents for 1913.................	$724,932 88
Total water rents for 1912.................	103,718 42
Total water rents for 1911.................	2,349 99
Total water rents for 1910.................	552 53
Total meter rents.........................	569,669 69
Total plumbing bills......................	72,492 41
Total meter plumbing.....................	7,099 52
Total interest on back water rents........	1,899 89
Total turn-offs	280 50
Total vacancies...........................	513 00
	$1,483,508 83

STATEMENT D.

Abatements Condensed for the Year 1913.

	No.	Delinquent	Current	Total
January	129	$862 74	$448 88	$1,311 62
February	75	434 61	294 92	729 53
March	88	322 92	518 19	841 11
April	77	467 94	503 83	971 77
May	313	3,456 86	594 26	4,051 12
June	99	332 08	531 60	863 68
July	65	222 48	349 18	571 66
August	46	116 62	352 70	469 32
September	64	129 52	426 19	555 71
October	44	182 46	235 78	418 24
November	97	165 13	740 66	905 79
December	40	98 51	308 75	407 26
	1,137	$6,791 87	$5,304 94	$12,096 81

STATEMENT E.

New Supplies for New Property, etc.

2,177 new supplies at $12; streets 25 feet wide and over	$26,124 00
32 new supplies at $8; streets 15 feet wide and under	256 00
25 new supplies at $6; streets less than 15 feet wide	150 00
1,022 joint pipe supplies at $6; (old accounts)	6,132 00
	$32,662 00

Note—The water rent on new property does not begin until the property is occupied.

STATEMENT F.

Balances Remaining on Ledgers December 31, 1913.

Current water rents	$156,061 04
Delinquent water rents	9,542 54
Meter rates	4,423 39
Plumbing bills	19,290 44
	$189,317 41

STATEMENT G.

Revenue Shown by Ledgers January 1, 1914.

No.	Dwellings	Rate	Total	
26,080	Houses 12 feet or under	$3 25	$84,760 00	
17,746	Houses over 12 feet	5 00	88,730 00	
28,527	Houses over 13 feet	6 50	185,425 50	
16,088	Houses over 14 feet	7 50	120,660 00	
8,466	Houses over 15 feet	9 00	76,194 00	
4,110	Houses over 16 feet	11 50	47,265 00	
3,702	Houses over 17 feet	15 50	57,381 00	
1,291	Houses over 18 feet	17 00	21,947 00	
3,864	Houses over 19 feet	19 50	75,348 00	
1,475	Houses over 22 feet	22 00	32,450 00	
1,314	Houses over 25 feet	25 00	32,850 00	
295	Houses over 30 feet	27 50	8,112 50	
183	Houses over 35 feet	30 00	5,490 00	
184	Houses over 40 feet	32 50	5,980 00	
				$842,593 00
	Warehouses			
1,369	22 feet or over	13 00	17,797 00	
608	17 feet and less than 22 feet	10 50	6,384 00	
262	Under 17 feet	8 00	2,096 00	
				26,277 00

STATEMENT G.

	Miscellaneous			
296	Hose attachments.....	$4 00	$1,184 00	
78	Churches..............	3 25	253 50	
36	Churches..............	6 50	234 00	
7	Motors and two fans..	32 50	227 50	
60	Fans, each...........	6 50	390 00	
6	Troughs..............	26 00	156 00	
367	Stables...........	13 00	4,771 00	
121	Gas engines	13 00	1,573 00	
4	Bathing tubs (public)..	13 00	52 00	
29	Photographers.........	13 00	377 00	
20	Bottlers	13 00	260 00	
12	Fountains.............	13 00	156 00	
2	Slaughter houses......	13 00	26 00	
10	Pickling establishments	13 00	130 00	
3	Butcheries.............	13 00	39 00	
7	Florists................	13 00	91 00	
9	Dyeing establishments.	6 50	58 50	
2	Dyeing establishments.	13 00	26 00	
1,166	Bars	6 50	7,579 00	
157	Laundries.............	6 50	1,020 50	
49	Dairies................	6 50	318 50	
116	Lunch rooms..........	6 50	754 00	
287	Soda fountains........	6 50	1,865 50	
7	Schools................	6 50	45 50	
182	Offices	5 00	910 00	
214½	H. P. Boilers, each...	3 50	750 75	
222	Drugs..................	4 00	888 00	
339	Bakeries...............	4 00	1,356 00	
170	Closets................	2 50	425 00	
695	Horses	2 00	1,390 00	
546	Carriages..............	2 00	1,092 00	
27	Urinals................	2 00	54 00	
4,252	Employees	50	2,126 00	
16	Fire plugs (county)...	25 00	400 00	
1	Engine house (county)	10 00	10 00	
1	Lawn hose............	13 00	13 00	
				$31,002 25
				$899,872 25
	Revenue from new supplies, repairs, etc., (estimated)			50,000 00
	Revenue from meters and indicators, (estimated)....			560,000 00
	Total revenue..................................			$1,509,872 25

STATEMENT H.

Receipts from General Licenses for the Year 1913.

One-horse wagons	$20,947 00	
Two-horse wagons	18,632 00	
Three-horse wagons	1,344 00	
Four-horse wagons	408 00	
Six-horse wagons	135 00	
Exchanges	35 00	
Numbers replaced	203 50	
Cabs	48 75	
Hacks	343 75	
Package carts	849 50	
		$42,946 50
Coal oil		1,653 00
Theatrical permits and licenses		7,302 03
Telephone and telegraph poles		17,474 00
Cars		4,490 00
Scows		829 50
Billiard tables	$195 00	
Pool tables	8,067 50	
Bagatelle tables	590 00	
		8,852 50
Bowling alleys		1,275 00
Pawnbrokers		2,833 35
O. E. A. licenses		296 55
Bacon		1,000 00
Sausage and pudding		50 00
Merchandise (women)		120 00
Fruit		14 00
Gasoline stoves		107 50
Employment agencies		614 60
Venders from wagons		6,745 00
Venders from baskets		1,468 00
Venders of country produce		385 00
Venders' badges replaced		34 25
Total general licenses		$98,540 78
Dog licenses	$22,819 50	
Old dog license tags sold	14 21	
Total for dog licenses		22,833 71
		$121,374 49
Deposited with the City Register		121,374 49

TABLE SHOWING NUMBER OF LICENSES ISSUED IN 1913.

One-horse wagon licenses		11,115
Two-horse wagon licenses		5,074
Three-horse wagon licenses		237
Four-horse wagon licenses		52
Six-horse wagon licenses		13
Exchanges		22
Numbers replaced		814
Cab licenses		18
Hack licenses		72
Package cart licenses		940
Coal oil licenses		1,653
Entertainment licenses		1,540
Theatres, moving picture parlors, etc		192
United Railway car licenses		875
Washington, Baltimore and Annapolis car licenses		23
Telegraph and telephone licenses as follows:		
Consolidated Gas Electric Light and Power Company, poles	5,018	
Chesapeake and Potomac Telephone Company, poles	3,070	
Western Union Telegraph Company, poles	167	
United Railway and Electric Company, poles	189	
Postal Telegraph Company, poles	143	
Baltimore and Ohio Railroad Company, poles	105	
Northern Central Railway Company, poles	7	
American District Telegraph Company, poles	1	
		8,700
Pawnbrokers' licenses		14
Scow licenses		420
Billiard table licenses		21
Pool table licenses		919
Bagatelle table licenses		61
Bowling alley licenses		28
O. E. A. licenses		123
Bacon licenses		20
Sausage licenses		10
Merchandise licenses, women		24
Employment agency licenses		32
Fruit licenses		7
Gasoline stove licenses		12
Venders from wagon licenses		1,349
Venders from basket licenses		734
Venders of country produce		77
Venders' badges replaced		81
Original dog licenses		4,517
Renewal dog licenses		14,578
Dog tags replaced		563

Report of the Chief Engineer

TO THE

Electrical Commission

OF BALTIMORE

1797

FOR THE YEAR 1913

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER

1914

REPORT

OF THE

CHIEF ENGINEER

TO THE

Electrical Commission of Baltimore.

BALTIMORE, January 1, 1914.

To the Honorable, the Chairman
and Members of the Electrical Commission.

GENTLEMEN:

I have the honor to submit the following report pertaining to the operations of this office during the year 1913:

CONDUIT LINES CONSTRUCTED.

During 1913 a greater amount of conduit was laid than in any other year since the work of constructing the municipal subway system was begun. Not only was the construction prosecuted on a larger scale, but the territory covered during that period was of a greater area, the activities of the department having extended to all sections of the city.

Considerably more than a million and a half duct feet of conduit were installed during the year, bringing the total amount now included in the system to 12,143,460.40 duct feet. This is exclusive of what is termed "special" construction, or, in other words, conduit laid in replacing lines and work of a special nature for which the department is reimbursed and which does not increase the capacity of the system for general cable occupancy. Under this special account 31,173.70 duct feet were installed during the year, which, added to previous construction, makes a grand total under this class of work of 425,574.53 duct feet.

Below is given a list of the principal lines constructed during the year.

Trunk Conduit.

Reisterstown road, from Liberty road to Wahotan avenue.
Reisterstown road, from Clifton avenue to Bryant avenue.
Fulton avenue, from North avenue to Druid Hill avenue.
Whitelock street, from Woodbrook avenue to east of Callow avenue.
Reservoir street, from west of Callow avenue to west of Mt. Royal avenue.
Francis street, from Fulton avenue to Retreat street.
Madison avenue, from north of Brooks lane to North avenue.
Linden avenue, from Whitelock street to North avenue.
Callow avenue, from Whitelock street to North avenue.
Railroad avenue, from Woodberry avenue to Union avenue.
Twenty-fifth street, from Hudson alley to Greenmount avenue.
Twenty-third street, from Mace street to Guilford avenue.
Twenty-first street, from Mace street to Guilford avenue.
St. Paul street, from North avenue to Thirty-first street.
Calvert street, from North avenue to Twentieth street.
Greenmount avenue, from North avenue to Gorsuch avenue.
Greenmount avenue, from north of Whitridge avenue to Twenty-eighth street.
Thirty-ninth street, from University Parkway to Oak street.
Twenty-seventh street, from Huntingdon avenue to Atkinson street.
Twenty-eighth street, from Guilford avenue to Hunter alley.
Thirtieth street, from Guilford avenue to Hunter alley.
Preston street, from Guilford avenue to Greenmount avenue.
West street, from Ridgely street to Peach alley.
Andre street, from Cuba street to Fort avenue.
Dolphin street, from Jordan alley to Morris street.
Dolphin street, from Park avenue to Rutter street.
Fayette street, from Caroline street to Wolfe street.
Federal street, from Calvert street to Greenmount avenue.
Fort avenue, from Charles street to Fort McHenry.
Frederick avenue, from Payson street to Gwynn's Falls.

Frederick avenue, from Gwynn's Falls to Tyson street.
Frederick avenue, from Van Bibber avenue to Caton avenue.
Frederick avenue, from Dorsey lane to Loudon avenue.
Fremont avenue, from Mosher street to Pennsylvania avenue.
Granby street, from Exeter street to Central avenue.
Baltimore street, from Wolfe street to Patterson Park avenue.
Baltimore street, from Patterson Park avenue to East avenue.
Patterson Park avenue, from Pratt street to Baltimore street.
Greenmount avenue, from North avenue to Preston street.
Howard street, from West street to Stockholm street.
Key Highway, from York street to Covington street.
Lafayette avenue, from Calvert street to Hargrove alley.
Berkeley street, from Howard street to Chase street.

SERVICE AND DISTRIBUTION CONDUIT.

Fremont avenue, from Baltimore street to Harlem avenue.
Granby street, from Exeter street to Central avenue.
High street, from Baltimore street to Eastern avenue.
Holliday street, from Saratoga street to Lexington street.
Light street, from Hill street to Lee street.
Park avenue, from Preston street to Hoffman street.
President street, from Stiles street to Fawn street.
Preston street, from Brevard street to Park avenue.
St. Paul street, from Pleasant street to Centre street.
Stiles street, from President street to East Falls avenue.
Stiles street, from Exeter street to High street.
Watson street, from Central avenue to High street.
Biddle street, from Park avenue to Brevard street.
Stiles street, from Central avenue to High street.
East street, from Hillen street to Front street.
Exeter street, from Hillen street to Front street.
Exeter street, from Lexington street to Fleet street.
Fawn street, from East Falls avenue to President street.
Fawn street, from President street to Central avenue.
Fayette street, from Fallsway to Central avenue.

SERVICE AND DISTRIBUTION—TYPE "B" CONDUIT.

Park avenue, from Preston street to Biddle street.
Pratt street, from High street to Lloyd street.
Druid Hill avenue, from Eutaw street to Preston street.

Lateral Distribution Conduit.

Tiffany alley, from Mosher street to McMechen street.
Tiffany alley, from Orchard street to point 100 feet south.
Bradford street, from Baltimore street to alley north.
Port street, from Baltimore street to alley north.
Rose street, from Baltimore street to alley north.
Belnord avenue, from Baltimore street to alley north.
Glover street, from Baltimore street to alley north.
Streeper street, from Baltimore street to alley north.
Curley street, from Baltimore street to alley north.
Curley street, from Baltimore street to alley south.
Hare street, from Baltimore street to alley north.
Hare street, from Baltimore street to alley south.
Robinson street, from Baltimore street to alley south.
East avenue, from Baltimore street to alley north.
Brunt street, from Baker street to point 60 feet north.
Brevard street, from Wilson street to alley north.
Etting street, from Baker street to Gold street.
Baker street, from Brunt street to Etting street.
Carter street, from Lafayette avenue to Bowen street.
Calvert street, from Lafayette avenue to White's alley.
White's alley, from Calvert street to second alley east.
Camel alley, from Cathedral street to point 95 feet west.
Dickson street, from Mosher street to alley north.
Dickson street, from Mosher street to alley south.
Dickson street, from Lafayette avenue to alley north.
Dickson street, from Lafayette avenue to alley south.
Jasper street, from Druid Hill avenue to alley south.
Fremont avenue, from Waltemeyer court to point 143 feet south.
Foster street, from Dolphin street to Enon alley.
Carlos terrace, from Federal street to alley north.
Carter street, from Federal street to alley north.
Carter street, from Federal street to alley south.
Jackson street, from Fort avenue to alley north.
Boyle street, from Fort avenue to alley north.
Gold street, from Etting street to Stoddard alley.
Stoddard alley, from Gold street to point 115 feet north.
Lafayette avenue, from Greenmount avenue to Carter street.
Homewood avenue, from Preston street to Mura street.
Mura street, from Homewood avenue to alley west.
Hampson street, from Bolton street to alley east.

Jordan alley, from Presstman street to North avenue.
Lovegrove alley, from Adams street to alley south of Lafayette avenue.
Hargrove alley, from Adams street to point 75 feet south of Lafayette avenue.
Brewer street, from Dolphin street to alley north.
Brewer street, from Dolphin street to alley south.
Brunt street, from north of Lafayette avenue to south of Lafayette avenue.
Division street, from Dolphin street to alley south.
Etting street, from Dolphin street to alley south.
Etting street, from Dolphin street to alley north.
Etting street, from alley south of Lafayette avenue to alley north of Lafayette avenue.
Elder alley, from Orchard street to Biddle street.
Jenkins alley, from alley south of Lafayette avenue to alley north of Lafayette avenue.
Jordan alley, from alley south of Lafayette avenue to alley north of Lafayette avenue.
McAllister court, from alley west of Guilford avenue to Townsend court.
Townsend court, from McAllister court to alley south of Lafayette avenue.
Little Monument street, from alley north of Orchard street to alley south of Orchard street.
Mason alley, from McMechen street to Mosher street.
Morris alley, from alley north of Lafayette avenue to alley south of Lafayette avenue.
Morris alley, from alley north of Bloom street to alley south of Bloom street.
Cecil alley, from Pennsylvania avenue to 157 feet east.
Morton alley, from Lanvale street to alley north.
Lovegrove alley, from Lanvale street to alley south.
Mason alley, from Lafayette avenue to alley north.
Mason alley, from Lafayette avenue to alley south.
Adams street, from Maryland avenue to Morton alley.
Morton alley, from Adams streets to alley south of Lafayette avenue.
Rutter street, from Dolphin street to Enon alley.
Vincent alley, from Laurens street to P., B. & W. R. R. tracks.
Oak street, from Malory lane to University parkway.
Charles street, from University parkway to Stratford road.
Thirty-ninth street, from University parkway to Oak street.
Buchanan street, from Twenty-fifth street to Ware alley.

One of the most important lines built during 1913 was a new trunk line in East Baltimore street and Patterson Park avenue, which provides a new means of entrance into the city for the high tension cables from McCall's Ferry.

Under normal conditions all of the electrical energy used in Baltimore for light and power and to operate the street railway system is supplied to the Consolidated Gas Electric Light and Power Company and the United Railways and Electric Company by the Susquehanna hydro-electric plant of the Pennsylvania Water and Power Company. This energy is delivered to the Highlandtown sub-station on the Philadelphia road, near Eighth street, through an aerial transmission line at a potential of 70,000 volts, and from there it is conveyed to the various distribution centers of the two local companies by means of a number of 13,000-volt underground cables, which reach their destination through the municipal conduit system.

All of the cables carrying this constantly increasing enormous amount of energy had, previous to the construction of this new line, been installed, from time to time, of necessity in one trunk line of conduits from the Highlandtown station via the Philadelphia road and Fayette street to the junction point at Fayette and Wolfe streets, where the different cable-runs diverge, until the line could not be made to accommodate an additional high-tension cable without further aggravating the then already too serious temperature conditions and inviting extra hazardous break-downs which result almost invariably in tying up the electrical activities of the entire city for an appreciable period.

To eliminate this condition and also to follow the custom universally observed in well-planned distribution systems of providing two entirely isolated groups for very important cables, whereby those in one line are always immune from disturbances from the other, a new specially-designed conduit line of such capacity for taking care of future development as to be compatible with the present rapid growth of the city was constructed in Baltimore street from the eastern city limits to Patterson Park avenue, and in Patterson Park avenue from Baltimore street to Pratt street, where it forms a junction with previously existing trunk lines; these, in turn, can be made to serve as runs to the various distribution centres and possess the additional advantage of providing independent paths for the cables to any one station.

The design of the new line is the culmination of exhaustive study and will easily meet the most exacting demands of this class of transmission with the utmost efficiency, especially as regards the ready dissipation of the enormous amount of heat generated with correspondingly small temperature rise in the cables.

In order that a ready comparison may be made of the amount of conduit constructed each year, and the cost thereof, a summary setting forth the construction under the several different classes of work is hereto appended under the title of Table L.

MANHOLES AND HOUSE CONNECTIONS.

During the year there were built in the course of the regular construction 258 trunk manholes, 141 service and distribution boxes, 160 lateral distribution manholes, and 216 manholes and junction boxes in connection with Type "B" construction. The number of houses connected with the subway system by direct underground connection was increased by 653, making the total number so served 8,557.

MISCELLANEOUS CONNECTIONS.

There were also constructed the following miscellaneous connections:

Trolley pole connections	78
Arc light connections	671
Fire alarm call-box connections	21
Police call-box connections	14

Connections from city manholes to Chesapeake and Potomac Telephone Company's manholes	4
Connections from city manholes to police and fire alarm telegraph manholes	10
Terminal pole connections	3
Lateral distribution pole connections	152

UNIT COSTS.

The following figures show the cost of the different divisions of the work, based on a duct-foot unit:

GENERAL EXPENSE.

Organization	$.0076 per duct foot.
Office	.0091 per duct foot.
Plans	.0055 per duct foot.
Total	$.0222 per duct foot.

TRUNK.

Excavation	$.0761 per duct foot.
Concrete	.0190 per duct foot.
Manholes	.0304 per duct foot.
Conduit	.0510 per duct foot.
Total	$.1765 per duct foot.

SERVICE AND DISTRIBUTION.

Manholes	$.0545 per duct foot.
Conduit	.1539 per duct foot.
Total	$.2084 per duct foot.

SERVICE AND DISTRIBUTION—TYPE "B."

Manholes	$.0626 per duct foot.
Conduit	.1880 per duct foot.
Total	$.2506 per duct foot.

LATERAL DISTRIBUTION.

Manholes	$.0330 per duct foot.
Conduit	.2105 per duct foot.
Total	$.2435 per duct foot.

EXPENDITURES.

The funds to carry on the construction were derived from the 1962 Conduit Loan, approved by the voters of Baltimore City in the fall of 1912.

The expenditures for the year 1913 were as follows:

Construction salaries	$16,060 49
Construction expenses (including all labor, material and miscellaneous expenses)	503,477 34

The expenditures for the operating and maintenance of completed conduits, which were borne by the general tax levy, amounted to $10,699.90.

NOTICES TO REMOVE POLES AND WIRES.

Notices to remove all poles and overhead wires at the following locations were issued during the year to the various wire using companies:

Front street, from Hillen to Forrest street.

Laurens street, from Fulton to Fremont avenues.

Fremont avenue, from Baltimore street to Columbia avenue.

In the area bounded by Pennsylvania avenue, Franklin street, Eutaw street, Biddle street, Cathedral street, Oliver street, Maryland avenue, Jones' Falls and North avenue.

In the area bounded by the east side of Charles street to the south side of Mulberry street, to the west side of St. Paul street, to the north side of Saratoga street, to the east side of Charles street.

A large proportion of the 1913 work was planned and prosecuted with a view of placing conduits in the beds of the streets before the paving improvements were made. As lists of streets to be paved are received by this office from time to time, the same are carefully considered, and where it is found that conduits would be necessary or advantageous at some future time in order to make the subway system complete and comprehensive, the department immediately proceeds to place lines in those streets. In a great majority of instances such streets are not contiguous to the system which is now in active operation, and therefore the conduits so built will not be available for cable occupancy until connected up so as to form a part of the net work of "live" lines.

For this reason, while many isolated sections of conduits have been installed during the year, notices to remove poles and wires in those parts of the city cannot be issued until the lines are so connected as to accommodate the cables of the various duct space lessees. As soon, however, as these connecting lines can be installed, an immense number of poles may be ordered removed and the wires placed under ground.

DUCT SPACE OCCUPIED AND CONDUIT RENTALS.

The United States Government was added to the list of lessees, the Treasury Department having executed, under date of July 1, 1913, a lease for duct space in the conduits connecting the Postoffice building with the Custom House and Appraisers' Stores buildings.

The rental collected during the year amounted to $120,800.46, derived from the following sources:

	Collected During 1913.	Previously Collected.	Total.
American Tobacco Co.............	$3.48	$1.74	$5.22
Baltimore & Ohio R. R. Co.......	1,872.91	14,541.49	16,414.40
Baltimore Bargain House..........	211.30	663.50	874.80
Baltimore Elec. Light & Power Co.	98.10	727.62	825.72
Baltimore Nat. Auto. Fire Alarm Co.	1,158.86	6,908.23	8,067.09
C. & P. Telephone Co............	300.28	9,023.75	9,324.03
Con. Gas Elec. Lt. & Power Co...	74,941.49	333,567.90	408,509.39
Crown Cork & Seal Co...........	50.00	800.00	850.00
Holmes Electric Protective Co......	629.36	4,099.42	4,728.78
Maryland Telephone Co...........	4,745.47	192,549.21	197,294.68
M. & M. Trans. Co...............	23.92	79.76	103.68
Monticello Distilling Co...........	5.02	13.13	18.15
Northern Central Ry. Co..........	374.98	587.67	962.65
P., B. & W. R. R. Co.............	337.87	338.46	676.33
Postal Telegraph-Cable Co.........	1,609.85	14,133.31	15,743.16
Purnell, J. Hurst (account closed)	....	255.57	255.57
Swift & Co.......................	63.14	326.68	389.82
United Rys. & Elec. Co...........	28,539.67	177,016.89	205,556.56
United States of America.........	77.97	....	77.97
University of Maryland...........	37.36	257.51	294.87
W., B. & A. Elec. R. R. Co........	699.56	3,025.76	3,725.32
Western Union Telegraph Co......	5,019.87	27,402.97	32,422.84
Total......................	$120,800.46	$786,320.57	$907,121.03

TABLE H—DUCT SPACE OCCUPIED AND VACATED, 1913.

Lessee.	Class of Cable.	To January 1, 1913. Main.	To January 1, 1913. Distributing.	To January 1, 1913. Total Classified.	To January 1, 1913. Total.	Duct Space Occupied During the Year 1913. Main Conduits. Occupied.	Main Conduits. Vacated.	Main Conduits. Net Occupied.	Distributing Conduits. Occupied.	Distributing Conduits. Vacated.	Distributing Conduits. Net Occupied.	Total Classified.	Total Occupied.	To January 1, 1914. Main.	To January 1, 1914. Distributing.	To January 1, 1914. Total Classified.	To January 1, 1914. Total.
American Tobacco Company	Electric Light and Power		49.66	49.66	49.66										49.66	49.66	49.66
Baltimore and Ohio Railroad Company	Electric Light and Power	23,185.70	42.42	23,228.12	39,187.80									23,185.70	42.42	23,228.12	39,187.80
	Telegraph	15,551.23	408.45	15,959.68										15,551.23	408.45	15,959.68	
Baltimore Bargain House	Electric Light and Power		3,018.65	3,018.65	3,018.65										3,018.65	3,018.65	3,018.65
Baltimore Electric Light and Power Company	Electric Light and Power		1,401.34	1,401.34	1,401.34										1,401.34	1,401.34	1,401.34
Baltimore National Automatic Fire Alarm Company	Fire Alarm Telegraph	60.00	17,060.66	17,120.66	17,120.66				1,337.39	1,320.70	16.69	16.69	16.69	60.00	17,077.35	17,137.35	17,137.35
Bartlett Hayward Company	Electric Light and Power		962.40	962.40	962.40										962.40	962.40	962.40
Chesapeake and Potomac Telephone Company	Telephone	269.60	3,767.36	4,036.96	4,036.96					357.10	357.10*	357.10*	357.10*	269.60	3,410.26	3,679.86	3,679.86
Consolidated Gas Electric Light and Power Company	13,000 v. A. C. Feeders	357,067.90	55.65	357,123.55	1,465,996.77	61,310.45	8,841.60	52,477.85				52,477.85	174,530.17	400,545.75	55.65	400,601.40	1,640,526.94
	High-Tension Feeders (2,200-6,600 v.)	276,470.68	1,126.24	277,596.92		32,383.54	5,531.47	26,852.07	27,692.89	152.67	27,540.22	54,392.29		303,322.75	28,666.46	331,989.21	
	Neutral	109,672.73	372.91	110,045.64					476.18		476.18	476.18		109,672.73	849.09	110,521.82	
	220 v. Feeders	47,111.02	5,502.91	52,613.93		13,947.46	8,868.70	5,078.76	1,161.08	1,757.07	595.99*	4,482.77		52,189.78	4,906.92	57,096.70	
	220 v. Mains	7,290.60	285,801.86	293,092.46		12,666.17	258.90	12,407.27	12,027.82	2,376.47	9,651.35	22,058.62		19,697.87	295,453.21	315,151.08	
	Service	407.20	125,498.05	125,905.25					13,166.29	3,437.16	9,729.13	9,729.13		407.20	135,227.18	135,634.38	
	Series Arc	68,528.80	151,655.10	220,183.90		7,312.80	7,025.00	287.80	31,845.73	5,821.41	26,024.32	26,312.12		68,816.60	177,679.42	246,496.02	
	Telephone	26,881.32	2,553.80	29,435.12		8,421.19	4,192.52	4,228.67	604.59	232.05	372.54	4,601.21		31,109.99	2,926.34	34,036.33	
Crook Horner Company	Electric Light and Power		263.60	263.60	263.60										263.60	263.60	263.60
Crown Cork and Seal Company	Electric Light and Power		1,489.60	1,489.60	1,489.60										1,489.60	1,489.60	1,489.60
Holmes Electric Protective Company	Burglar Alarm	810.00	8,746.93	9,556.93	9,556.93				494.12	71.40	422.72	422.72	422.72	810.00	9,169.65	9,979.65	9,979.65
Maryland Telephone Company	Telephone	76,033.83	39,507.36	115,541.19	115,541.19		34,943.15	34,943.15*	989.74	15,123.99	14,134.25*	49,077.40*	49,077.40*	41,090.68	25,373.11	66,463.79	66,463.79
Merchants and Miners Transportation Company	Electric Light and Power		341.78	341.78	341.78										341.78	341.78	341.78
Monticello Distilling Company	240 v. D. C. Service		71.61	71.61	71.61										71.61	71.61	71.61
Municipal	Fire Alarm Telegraph	107,676.06	65,028.01	172,704.07	301,958.67	4,635.90	1,723.45	2,912.45	2,202.69	724.82	1,477.87	4,390.32	13,715.12	110,588.51	66,505.88	177,094.39	315,673.79
	Police Telegraph	85,251.51	22,447.72	107,699.23		8,633.30	863.95	7,769.35	953.17	135.03	818.14	8,587.49		93,020.86	23,265.86	116,286.72	
	Electric Light and Power	16,617.00	2,337.89	18,954.89					920.74	183.43	737.31	737.31		16,617.00	3,075.20	19,692.20	
	Telephone	641.80		641.80										641.80		641.80	
	Bond	1,648.30	310.38	1,958.68										1,648.30	310.38	1,958.68	
Northern Central Railway Company	220 v. A. C. Feeders	636.60	235.62	872.22	5,768.92									636.60	235.62	872.22	5,768.92
	Arc Light	778.50	369.81	1,148.31										778.50	369.81	1,148.31	
	240 v. D. C. Feeders	141.90	400.78	542.68										141.90	400.78	542.68	
	Telephone	1,469.00	384.20	1,853.20										1,469.00	384.20	1,853.20	
	Telegraph	1,215.80	136.71	1,352.51										1,215.80	136.71	1,352.51	
Philadelphia, Baltimore and Washington Railroad Company	2,200 v. A. C. Feeders	4,940.50	266.60	5,207.10	5,207.10	3,617.80	1,441.30	2,176.50	829.60		829.60	3,006.10	3,006.10	7,117.00	1,096.20	8,213.20	8,213.20
Postal Telegraph Cable Company	Telegraph	17,223.95	8,232.23	25,456.18	25,456.18	9,807.00		9,807.00	505.78	1,337.62	831.84*	8,975.16	8,975.16	27,030.95	7,400.39	34,431.34	34,431.34
Swift & Company	Electric Light and Power	646.60	255.47	902.07	902.07									646.60	255.47	902.07	902.07
United Railways and Electric Company	13,000 v. A. C. Feeders	227,169.04		227,169.04	578,307.19	478.20	511.50	33.30*				33.30*	63,066.17	227,135.74		227,135.74	641,373.36
	600 v. D. C. Feeders	294,042.43	2,887.60	296,930.03		67,274.28	8,546.20	58,728.08				58,728.08		352,770.51	2,887.60	355,658.11	
	Return Feeders	33,708.84		33,708.84		4,183.13		4,183.13	188.26		188.26	4,371.39		37,891.97	188.26	38,080.23	
	Cable Returns	20,499.28		20,499.28										20,499.28		20,499.28	
United States of America	Electric Light and Power					1,787.80		1,787.80	1,226.51		1,226.51	3,014.31	3,014.31	1,787.80	1,226.51	3,014.31	3,014.31
United States Hydrographic Survey	Time Ball	819.10	875.84	1,694.94	1,694.94									819.10	875.84	1,694.94	1,694.94
University of Maryland	Electric Light and Power	438.48	95.34	533.82	533.82									438.48	95.34	533.82	533.82
Washington, Baltimore and Annapolis Electric Railroad Co.	Telephone	8,997.96	1,765.68	10,763.64	10,763.64	767.90	770.40	2.50*				2.50*	2.50*	8,995.46	1,765.68	10,761.14	10,761.14
Western Union Telegraph Company	Telegraph	43,988.10	39,633.82	83,621.92	83,621.92	96.30	868.65	772.35*	5,636.96	7,067.05	1,430.09*	2,202.44*	2,202.44*	43,215.75	38,203.73	81,419.48	81,419.48
Totals		1,877,891.36	795,362.04	2,673,253.40	2,673,253.40	237,332.22	84,386.79	152,945.43	102,259.54	40,097.97	62,161.57	215,107.00	215,107.00	2,030,836.79	857,523.61	2,888,360.40	2,888,360.40

*Indicates cable withdrawn

Municipal cables for police telegraph, fire alarm telegraph, electric light and power, etc., occupy more than 315,000 feet of the ducts, for which no rental is charged. Had rental at the established rate been collected for this space, the year's collections would have been increased by approximately $15,000.

ELECTROLYSIS.

It seems essential that a brief article relative to the harmful effects of electrolytic action upon underground metallic structures should be presented in consonance with and as a supplement to former publications upon the same subject submitted to the commission during its early career.

The general nature of this action and the causes which promote it are too well known to warrant an elaborate disquisition. Briefly, it may be compared to the action which occurs in the ordinary commercial electro-plating bath. The current which enters the bath through the anode of silver, or some other metal suspended therein, flows through the electrolyte, composed of a metallic salt, and out through the cathode or the article to be plated. The action which follows causes the electrolyte to be decomposed into its constituents which appear at the electrodes, the metallic element forming a deposit upon the cathode and the remaining element entering into chemical combination with the anode which, as a result, is ultimately destroyed. In like manner, the return current from an electric railway system operating a ground negative return, flowing in its path from the cars back to the generating station, creates a condition similar to what exists in a plating bath for the reason that all of this current does not confine itself solely to the rails, but diverts, in part, to all available paths contiguous to the tracks, such as water pipes, gas pipes, the lead sheathings of underground cables, etc., dividing among them inversely as their respective resistances. At the point where the various subterranean structures receive the stray current from the tracks the rails are analogous to the anode and the structures to the cathode; consequently, at these locations the rails waste away and the structures are left unharmed. But at those points where the vagrant currents leave the structures, as they eventually are compelled to do, in order to drain to the generating station or to some other path of lower resistance, the conditions are reversed; in other words, the subterranean structures serve as anodes, and, as a result, their gradual disintegration ensues, provided, of course, that the surrounding medium or earth contains sufficient moisture and metallic salt in solution to act as an electrolyte. As to this latter condition, observation has demonstrated conclusively that the common soils, especially in large cities, contain all the necessary elements in sufficient quantities to make convenient electrolytes and, therefore, it can be generally assumed that wherever a difference of potential exists between any underground metallic structure and the earth, rails, or some other structure, indicating a flow of current of one to the other, the structure from which the current is flowing is undergoing disintegration by the process of electrolysis and will eventually be destroyed if the action is allowed to continue.

During the progress of its work this department has found many examples of the evil effect of electrolysis upon the various pipe systems in this city; in some cases the life of the structures has been seriously impaired, while in other instances the action has been so acute, or has continued for a sufficient length of time, to have caused complete destruction of the properties, necessitating their renewal. It is unquestionable that the process of electrolysis in this city is producing a gradual but constant dissolution of the metallic subterranean structures in certain localities, chiefly in the vicinities of the railway sub-stations, and that it will be but a matter of time before serious losses will be incurred as a result. To emphasize this prediction it is only necessary to mention that within the last several months this department discovered a certain underground system, which performs a highly important service for the city, to have been rendered prematurely unsafe, due entirely to electrolytic action. As a matter of fact, the structure was in such a critical condition at one location as to be unfit for use and is now being renewed.

The only phase of the question in which this department is vitally interested, however, appertains to the effect of this action upon the underground cables housed in the municipal conduits, and, as may be noted from the earlier reports, not a little apprehension was entertained a few years ago regarding the safety of the cables. These fears were not unwarranted, because at that time the sheathings of quite a number of cables showed evidence of deterioration; but since then, however, conditions have changed to such a marked degree that attention is seldom now directed to a case of this nature and most of the rare instances brought to notice at the present time show unmistakable signs of having occurred years past. The principal factors responsible for the extremely enviable conditions now enjoyed by underground cables as compared with other subterranean structures, in so far as concerns the harmful effects of electrolysis, are the greatly increased number of cables in the conduits and that the lead sheathings of these cables are electrically connected or bonded one to the other in every manhole. The sheathings thereby constitute a very effective net-work of electrical drains of enormous capacity and, inasmuch as this net-work ties in eventually with the negative bus-bars in the railway sub-stations, either by means of suitable independent copper returns installed for that particular purpose or through the sheathings of a great many railway cables running direct to the stations, the vagrant currents picked up by the cable systems drain back to the generating stations through a path of such low resistance as to preclude leakage en route. With such attractive conditions it is axiomatic, from the preceding explanation, that the possibility of destructive action is rendered remote. This condition, of course, does not hold good in outlying and isolated trunk lines containing cables whose sheathings are of comparatively small capacity, and it is only in such localities that conditions are favorable to destructive action; but even in these cases remedial measures can usually be applied that will reduce to a minimum the possibility of deterioration.

In spite of the confidence felt as to the immunity of the great majority of cables from depreciation, comprehensive electrolytic surveys and tests are constantly being conducted to determine where hazardous conditions may have arisen, due to unforeseen changes, in order that precautionary measures may be applied to counteract any injurious action. In this connection this department stands ready at all times to co-operate with and to render all possible assistance to the lessees of the conduits in safeguarding their equipment from the ravages of electrolysis.

It is obvious that the protection of pipe systems and similar metallic structures is not pertinent to the department and is entirely beyond the pale of its jurisdiction. Consequently, it cannot render a positive opinion upon the conditions of the systems, but, inasmuch as electrolytic surveys showing the conditions of one structure necessarily reflect the condition of other structures, the department believes, from the knowledge it has thus acquired from its cable surveys, that probable heavy losses might be averted in the future if the different interests maintaining the structures were to conduct regular systematic investigations for the purpose of protecting their properties against electrolytic disintegration. In this connection it may be advisable to mention that remedies to counteract unfavorable conditions should never be applied inadvertently, but should be selected and administered as the result of an extensive reconnaissance and exhaustive tests; otherwise, the trouble may be aggravated still further. Cases of this nature have frequently occurred as a result of the promiscuous bonding together of structures at positive points where a temporary relief may have been secured at the expense of endangering the system to a far greater extent in other localities. As no two cases are alike, no particular remedy can be recommended; but the most efficient method, possessing the time-honored sanction of authority, for the prevention of electrolytic disintegration requires the installation of a suitable independent return, running from the negative buses in the railway sub-stations and tying in with the structure at the proper drainage point.

In conclusion, it may be added that the question of electrolysis is considered of such vital importance by some cities that legislation has been enacted compelling the railway companies to take care of their return equipment in such a manner as to preclude, as far as possible, the transfer of currents to metallic structures, thereby insuring all underground property to a certain extent against unnatural corrosion.

Respectfully submitted,

RALEIGH C. THOMAS,
Chief Engineer.

TABLE L.

Summary of Duct Feet of Conduit Constructed Under the Several Classes of Work—Showing Total Cost Each Year.

Year.	Trunk.	Service and Distribution.	Service and Distribution, Type B.	Lateral.	Total.	Construction. Expense.	General Expense.	Total Cost.	Cost Per Duct Foot.
1898-99	1,582,359.60	20,333.60			1,602,693.20	$289,089.11	$38,173.40	$327,262.51	$0.1804
1900	603,287.20	101,733.00			705,020.20	147,381.67	30,064.81	177,446.48	.2517
1901	381,251.10	454,189.20			835,440.30	183,386.82	29,021.04	212,407.86	.2542
1902	398,667.50	226,012.40			624,679.90	112,771.02	26,466.31	139,237.33	.2229
1903	355,939.30	17,502.50			373,441.80	99,089.03	21,701.00	120,790.03	.3235
1904	85,126.40	332,230.30			417,356.70	95,690.64	24,086.12	119,776.76	.2869
1905	572,292.80	179,748.00			752,040.80	141,557.39	38,949.18	180,506.57	.2400
1906	312,206.10	195,327.60		143,740 00	651,273.70	136,532.35	48,614.44	185,146.79	.2843
1907	277,490.80	204,801.60		62,072.20	544,364.60	130,888.47	45,921.11	176,809 58	.3248
1908	356,043.50	307,399.90		82,117.00	745,560.40	155,771.66	45,646.53	201,418.19	.2702
1909	471,821.80	92,025.80	281,606.60	32,188.60	877,642.80	167,561.57	37,503.56	205,065.13	.2337
1910	460,575.20	63,754.80	429,754.50	101,040.30	1,055,124.80	299,238.14	27,767.37	327,005.51	.3099
1911	428,738.70	62,410.20	261,400.60	44,311.80	796,861.30	210,644.09	30,543.14	241,187.23	.3027
1912	309,062.30	44,035.60	23,300.00	156,182.80	532,580.70	169,846.40	27,920 97	197,767.37	.3713
1913	1,005,377.90	123,399.30	184,493.40	316,108.60	1,629,379.20	464,533.65	36,094.51	500,628.16	.3073
Total	7,600,240.20	2,424,903.80	1,180,555.10	937,761.30	12,143,460.40	$2,803,982.01	$508,473.49	$3,312,455.50	$0.2728

THIRTIETH ANNUAL REPORT

OF THE

Board of Fire Commissioners

AND

FIFTY-FIFTH ANNUAL REPORT OF THE FIRE DEPARTMENT

TO THE

Mayor and City Council of Baltimore

FOR THE

FISCAL YEAR ENDING DECEMBER 31, 1913

1797

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER

1914

OFFICERS OF THE DEPARTMENT

FIRE COMMISSIONERS

RICHARD H. JOHNS, President

ISAAC FRANK　　SIDNEY T. MANNING

SECRETARY AND CLERK

PINKNEY W. WILKINSON

CHIEF ENGINEER

AUGUST EMRICH

DEPUTY CHIEF ENGINEER

LEVIN H. BURKHARDT

DISTRICT ENGINEERS

First District - - - - -	JAMES T. DUNN
Second District - - - - -	JOHN L. EMERSON
Third District - - - - -	FREDERICK BRANAN
Fourth District - - - - -	E. LOUIS SHIPLEY
Fifth District - - - - -	JAMES A. CAMPBELL
Sixth District - - - - -	JOHN KAHL
Seventh District - - - - -	FIELDING H. LUCAS
Eighth District - - - - -	MICHAEL A. LIND

SUPERINTENDENT OF MACHINERY

THOMAS H. MEUSHAW

ASSISTANT SUPERINTENDENT OF MACHINERY

JOHN N. BLETZER

SUPERINTENDENT OF FIRE ALARM TELEGRAPH

JAMES B. YEAKLE

REPORT

OFFICE OF THE BOARD OF FIRE COMMISSIONERS.

BALTIMORE, January 1, 1914.

To the Honorable the Mayor and City Council of Baltimore.

GENTLEMEN:

The Board of Fire Commissioners respectfully submit herewith the following as the fifty-fifth annual report of the Fire Department of the City of Baltimore for the year ending December 31, 1913.

FIRES.

During the year 1913 the Fire Department responded to 1,978 alarms of fire. As compared with 1912, there was an increase of 31 alarms.

The number of alarms received during the year are classified as follows:

Number of brick, stone and iron buildings	1,508
Number of wooden buildings	144
Other than buildings	256
False alarms	70
	1,978

Number of fires in brick, stone or iron buildings	1,508
Number of fires in wooden buildings	144
Number of fires in other than buildings	256
	1,908

Number of fires confined to building or place of origin	1,895
Number of fires extending to adjoining buildings	8
Number of fires extending beyond adjoining buildings	5
	1,908

IMPROVEMENTS, 1913.

Installation of additional boiler at the Pumping Station of the High Pressure Service.

Automobile runabouts purchased for use of Deputy Chief and First, Third, Fourth and Eighth District Engineers.

Engine Companies Nos. 4, 5, 8, 9, 18, 19 and 25, equipped with automobile hose wagon.

The engine of Engine Company No. 32, equipped with Christie tractor.

The engine of Engine Company No. 5 equipped with couple-gear tractor.

The truck of Truck Company No. 1 equipped with American-LaFrance Fire Engine Company tractor.

Engine Companies Nos. 5, 8, 9, 10, 11, 12, 13, 18, 19, 26, 27, 28, 34 and 38, equipped with portable hydrant-heads for High Pressure Service.

The installation of 6,000 feet of the best quality of 2½-inch rubber-lined fire hose.

The installation of 2,000 feet of the best quality of 2½-inch rubber fire hose.

The installation of 2,000 feet of the best quality of 3-inch rubber-lined fire hose for use on fireboats.

The installation of twelve Bresnan cellar nozzles.

The installation of a pulmotor on Department ambulance.

The installation of a Jumbo nozzle, with special portable hydrant-heads and tips for nozzles of 2½-inch, 3-inch, 3½-inch and 4-inch, for direct connection with system of the High Pressure Service.

The Repair Shop equipped with tools so as to take care of departmental work generally.

A general system of building inspection for the purpose of reporting violations of the building laws.

A fire-prevention bureau established under command of Capt. Edgar B. McKnew, No. 27 Engine Company, on October 29, 1913, and which operation has resulted in a very material reduction in fire hazards.

A modern fireboat provided in place of former fireboat "Cataract," and which will be placed in service the early part of the coming year.

The installation of Truck Company No. 18 at quarters of No. 20 Engine Company, North avenue and Tenth street, Walbrook.

IMPROVEMENTS, 1914.

Tractors for fire engines.

Automobile chasses for hose wagons.

Automobiles for district engineers.

Additional red lights for fire-alarm boxes.

PUBLIC BUILDINGS.

Heating and lighting City Hall, City Hall Annexes and Court House, from Pumping Station of High Pressure Fire Service.

EXPENDITURES.

The expenditures for the Fire Department for the year 1913 were as follows:

Salaries	$751,932 03
Expenses	197,902 94
Truck Company No. 18, salaries	7,191 11
High Pressure Service	14,538 82
Hydrant heads	5,775 00
Fireboat "Cataract"	46,302 61
Pumping Station, boiler	15,000 00
Automobiles, district chiefs	6,000 00
Chasses, hose wagons	29,194 14
Tractors, engines and trucks	9,375 00
Repair Shop, tools	4,000 00
Firemen's widows	5,187 36
Lottie C. Curry	300 00
Mary A. McGraw	400 00
Total	$1,093,099 01

Respectfully submitted,

RICHARD H. JOHNS, *President,*
ISAAC FRANK,
SIDNEY T. MANNING,
Commissioners.

APPROPRIATIONS FOR 1914.

Salaries		$778,060 00
Apparatus	$5,000 00	
Apparatus repairs	6,000 00	
Accidents	3,000 00	
Feed	30,000 00	
Fuel	14,000 00	
Furniture	1,000 00	
Harness	1,000 00	
Horseshoeing	7,500 00	
Hose	10,000 00	
Electricity and gas	3,800 00	
Insurance, accident	4,300 00	
Washing	6,750 00	
Sick	5,000 00	
Pensioners, regular	24,000 00	
Fire Alarm Telegraph Department	13,000 00	
Cable for subways	10,000 00	
Fire alarm boxes	2,000 00	
Office, expenses	1,000 00	
Miscellaneous	8,000 00	
Storeroom	10,000 00	
Pumping Station, fuel and oils	16,500 00	
Fireboats, fuel and oils	3,500 00	
Pipe line system, repairs	2,000 00	
		187,350 00
Pensions, firemen's widows		5,025 00
		$970,435 00

NEW IMPROVEMENTS, 1914.

Tractors for engines and trucks	$12,000 00	
Chasses for hose wagons	40,000 00	
Automobiles for district engineers	6,000 00	
Red lights, fire alarm boxes	5,000 00	
		63,000 00

ANNUAL APPROPRIATIONS.

Mary A. McGraw	$400 00	
Lottie C. Curry	300 00	
		700 00
Total appropriations		$1,034,135 00

FIRE DEPARTMENT.

Appropriations, 1913	$1,128,569 32	
Balance carried forward from 1912	45,095 85	
Amount received from:		
Baltimore County Commissioners	1,740 93	
Martin Wagner Company	847 50	
Paving Commission	343 11	
Contingent Fund	700 00	
J. S. Young Company	127 90	
G. Ober Sons & Co.	159 60	
Wise Brothers	133 90	
Indemnity life Pipeman Emil Myers	500 00	
		$1,178,218 11

EXPENDITURES.

Salaries	$751,932 03	
Apparatus	3,659 25	
Apparatus repairs	11,744 52	
Accidents	2,994 73	
Feed	30,893 22	
Fuel	13,782 52	
Furniture	938 63	
Harness	571 70	
Horseshoeing	7,335 27	
Hose	12,120 00	
Electricity and gas	3,106 91	
Insurance	3,827 00	
Washing	7,333 00	
Sick	4,696 16	
Pensioners—regular	24,994 68	
Pensioners—firemen's widows	5,187 36	
Fire Alarm Telegraph Department	17,158 04	
Cable for subways	9,058 15	
Fire alarm boxes	1,825 60	
Office expenses	880 48	
Miscellaneous	10,144 68	
Storeroom	10,775 49	
Pumping Station—Fuel and oils	16,354 77	
Fireboats—Fuel and oils	3,096 26	
Pipe Line System—Repairs	611 88	
Amounts carried forward	$955,022 33	$1,178,218 11

Amounts brought forward	$955,022 33	$1,178,218 11
Fireboat "Cataract"—Rebuilding	46,302 61	
Tractors—Engines and trucks	9,375 00	
Chasses—Hose wagons	29,194 14	
Hydrant heads—High Pressure Service	5,775 00	
Repair Shop—Tools	4,000 00	
Automobiles—District engineers	6,000 00	
Truck Company No. 18—Salaries	7,191 11	
High Pressure Service	14,538 82	
Pumping Station—Boiler	15,000 00	
Lottie C. Curry	300 00	
Mary A. McGraw	400 00	
		1,093,099 01
Surplus of credit		$85,119 10
Balance to surplus	$12,874 50	
Balance carried forward to 1914	72,244 60	
		85,119 10

HIGH PRESSURE SERVICE—WATER TOWER STATION No. 2.

Cost.

Appropriations				$971,559 32
Pipe Line:				
Construction	$529,848 87			
Paving streets	10,084 32			
Water Department connection	1,471 22[1]			
Hydrant heads	5,775 00			
Tools	848 24			
Advertisements and blue prints	164 95			
		$548,192 60		
Pumps:				
Pumps*	$66,474 50			
Interest charges	1,848 50			
		68,323 00		
Boilers:				
Boilers	$44,192 60			
Interest charges	760 77			
		44,953 37		
Boilers and Pumps:				
Piping		36,255 66		
Pumping Station:				
Ground	$32,633 40			
Building	152,091 06			
Test holes	5,501 08			
Water Department connection	135 66			
Advertisements, specifications and blue prints	401 78			
Miscellaneous	477 98			
		191,240 96		
Engineering		42,020 82		
Fire alarm service		4,791 00		
			$935,777 41	
Water Tower Station No. 2:				
Ground		$10,647 60		
Building		24,113 81		
			34,761 41	
				970,538 82
Balance to surplus				$1,020 50
Balance carried forward to 1914				1,020 50

REVENUE.

Salaries	$103 08
Hose	257 70
Manure	414 00
Horses	965 75
Pole lines	10 00
Fire alarm boxes	154 60
Fire alarm boxes—Damage	102 50
Fire alarm service	350 25
Furniture	46 00
Apparatus	24 50
Metals	370 18
Tires	31 90
	$2,830 46

REPORT

OF THE

CHIEF ENGINEER

1913

REPORT.

Office of The Chief Engineer.

Baltimore, January 1, 1914.

To the Honorable the Board of Fire Commissioners :

Gentlemen — I have the honor to submit herewith the annual report of the Chief Engineer, it being the Fifty-fifth Annual Report of the paid Fire Department.

Incorporated herewith are statistical statements showing operations of the Fire Department for the year in detail.

It is my sad duty to report the death of the following members of the Fire Department during the year :

JAMES J. REYNOLDS,

CAPTAIN,

NO. 32 ENGINE COMPANY,

Age 55 Years.

Appointed July 20, 1889.

Died February 25, 1913.

JOHN CALDER,

ENGINEMAN,

No. 11 ENGINE COMPANY,

Age 66 Years.

Appointed October 8, 1870.

Died September 4, 1913.

HENRY R. SEIPPEL,

PIPEMAN,

NO. 5 ENGINE COMPANY,

Age 64 Years.

Appointed December, 1, 1874.

Died January 21, 1913.

JOSEPH H. DALY,

LADDERMAN,

NO. 5 TRUCK COMPANY,

Age 59 Years.

Appointed January 15, 1881.

Died December 22, 1913.

EMIL MYERS,

Pipeman,

No. 27 Engine Company,

Age 28 Years.

Appointed August 15, 1909.

Died May 31, 1913.

Died as result of injuries received in company quarters.

WILLIAM L. ERDMAN,

PIPEMAN,

NO. 31 ENGINE COMPANY,

Age 31 Years.

Appointed July 1, 1907.

Died March 3, 1913.

PENSIONER THOMAS H. HUMPHREYS,

Age 72 Years.

Appointed July 12, 1873.

Retired July 12, 1892.

Died July 21, 1913.

PENSIONER JOHN H. DEAL,

Age 72 Years.

Appointed February 1, 1872.

Retired January 9, 1908.

Died May 2, 1913.

The installation of new companies at the following locations:

Truck Company installed at quarters of No. 17 Engine Company, Fort avenue and Haubert street.

Truck Company installed at quarters of No. 29 Engine Company, Park Heights avenue, near Kate avenue.

Engine Company installed at quarters of No. 14 Truck Company, Gorsuch avenue, near Harford Road.

The installation of an engine and truck company in the vicinity of Remington avenue and Twenty-ninth street.

The extension of the High Pressure Fire Service.

The above recommendations are, in my opinion, absolutely necessary, on account of the fact that these sections are growing rapidly and have not sufficient fire protection at the present time.

I desire to express my sincere appreciation to the Board of Fire Commissioners, as well as members of the Fire Department generally, for co-operation in maintaining the efficiency of the service.

The Police Department and Fire Insurance Salvage Corps have my sincere thanks for the assistance rendered the service in the performance of duty.

Respectfully submitted,

AUGUST EMRICH,
Chief Engineer.

TABLES

FIRE DEPARTMENT PROPERTY.

Engine Houses, Equipment, Engines and Fire Boats.

Companies.	Acquired.	Location.	Size of Lot. (Feet.)	Cost.		Ground Rent.	Estimated Value of Equipment, Dec. 31, 1913.
				Building.	Lot.		
No. 1 Engine Co.	1907	Paca and Mulberry streets	140 x 41⅓	$44,997 01	$14,506 90		$13,177 00
No. 2 Engine Co.	1859	Barre street, near Sharp	92 x 25	10,000 00	1,400 00	$62 50	14,425 00
No. 3 Engine Co.	1859	Lombard street, near High	100 x 23	8,000 00	3,333 33	150 00	14,327 00
No. 4 Engine Co.	1859	Lexington street, near North	120x21-9½	13,000 00	1,924 16		25,560 00
No. 5 Engine Co.	1859	Ann street, near Lombard	140 x 34	15,000 00	8,314 00		11,387 00
No. 6 Engine Co.	1859	Gay and Ensor streets	107-2 x 48-8	22,000 00	10,000 00	62 00	15,255 00
No. 7 Engine Co.	1859	Eutaw street and Druid Hill avenue	33 x 57	13,000 00	3,500 00	27 00	14,017 00
No. 8 Engine Co.	1871	Mulberry street, near Schroeder	120 x 23	10,000 00	2,350 00		12,300 00
No. 9 Engine Co.	1872	Madison street, near Broadway	150 x 33	12,000 00	2,640 00		22,337 00
No. 10 Engine Co.	1872	Columbia avenue, near Poppleton street	100 x 22	12,000 00	1,173 33		12,735 00
No. 11 Engine Co.	1874	Eastern and Patterson Park avenues	64 x 28	12,000 00		123 75	13,446 00
No. 12 Engine Co.	1875	Fort and Riverside avenues	125 x 25	12,000 00		150 00	13,269 00
No. 13 Engine Co.	1876	Myrtle and Fremont avenues	192-6x180x68	19,463 00	2,500 00		15,173 00
No. 14 Engine Co.	1888	Hollins street, near Monroe	62-5¼x130-3½	14,000 00	3,000 00		14,922 00
No. 15 Engine Co.	1890	Lombard street, near Howard	170 x 33	20,000 00	10,000 00		24,913 00
No. 16 Engine Co.	1909	Foot of President street		13,965 00			c65,000 00
No. 17 Engine Co.	1895	Fort avenue and Haubert street	51-8 x 97	13,000 00	2,150 00		10,446 00
No. 18 Engine Co.	1892	Twenty-first street, near Maryland avenue	140 x 36	13,600 00	3,400 00		17,672 00
No. 19 Engine Co.	1895	North avenue and Bond street	120 x 40	16,000 00	4,000 00		17,532 00
No. 20 Engine Co.	1896	North avenue and Tenth street	110 x 60	16,059 00	1,500 00		12,176 00
No. 21 Engine Co.	1897	Roland avenue and Oliver Place	90 x 50	15,000 00	2,500 00		12,042 00
No. 22 Engine Co.	1901	Patuxent and O'Donnell streets	120 x 60	21,846 00	3,000 00		13,102 00
No. 23 Engine Co.	1902	Saratoga street, near Howard	80 x 50	22,354 75	23,145 25		19,810 00
No. 24 Engine Co.	1903	Patterson Park avenue and Orleans street	85 x 25	16,500 00	3,500 00		9,962 00
No. 25 Engine Co.	1903	Gold and McCulloh streets	37½x120	31,136 13	3,020 00		15,750 00
No. 26 Engine Co.	1905	Leadenhall and West streets	40 x100	20,065 16	2,434 84		13,312 00
No. 27 Engine Co.	1905	Columbia ave., near Little Greene street	168-5½ x 46	17,900 00	8,100 00		20,909 00
No. 28 Engine Co.	1906	Guilford and Mt. Royal avenues	45x115.9x147.1	23,526 25	8,473 75		20,284 00
No. 29 Engine Co.	1906	Park Heights and Kate avenues	60.3 x125	28,077 93	2,083 10		13,205 00
No. 30 Engine Co.	1907	Frederick avenue, near B. & P. R. R.	72 x150 63.6x147.5	28,901 05	4,388 75		9,995 00
No. 31 Engine Co.	1901	York road above Thirty-first street	50 x 150	17,677 33	4,737 23	75 00	9,496 00
No. 32 Engine Co.	1907	South Gay street, near Baltimore	122½ x 66	29,671 57	29,893 43		16,967 00
No. 33 Engine Co.	1904	Harford avenue and Oliver street	34-3¼x94x90x 98-11	28,098 96	4,576 01		12,312 00
No. 34 Engine Co.	1908	Caroline street, near Gough	37-7x100	24,951 98	5,048 02		12,880 00
No. 36 Engine Co.	1909	Edmondson avenue and Bentalou street	50 x187	27,791 42	3,043 75		9,502 00
No. 37 Engine Co.	1909	Ridgely and West streets	50 x155	24,040 38	3,800 72		12,535 00
No. 38 Engine Co.	1909	Baltimore and Fremont streets	45-7x153-2	23,936 30	11,063 70		12,921 00
No. 39 Engine Co.	1909	See No. 16 Engine Company					d 120,395 00
No. 40 Engine Co.	1912	See No. 12 Truck Company					5,721 00
High Pressure Service	1909	Pumping Station (South street) and Pipe Line System	69-3½x137	b152,091 06	32,633 40		a970,538 82
No. 1 H. and L. Co.	1907	See No. 32 Engine Company					14,228 00
No. 2 H. and L. Co.	1859	Paca and Fayette streets	150 x 33	26,715 08	5,000 00	105 00	15,907 00
No. 3 H. and L. Co.	1859	See No. 5 Engine Company					7,616 00
No. 4 H. and L. Co.	1907	McCulloh street, near Biddle	100 x 42	24,935 00	7,265 00		9,841 00
No. 5 H. and L. Co.	1904	See No. 33 Engine Company					8,788 50
No. 6 H. and L. Co.	1888	Hanover and Ostend streets	133 x 25	12,000 00	2,000 00		9,433 00
No. 7 H. and L. Co.	1901	See No. 31 Engine Company					5,873 00
No. 8 H. and L. Co.	1907	See No. 30 Engine Company					6,058 00
No. 9 H. and L. Co.	1897	See No. 21 Engine Company					5,377 50
No. 10 H. and L. Co.	1895	Lafayette avenue, near Stricker street	145 x50-1	14,000 00	5,000 00		8,729 00
No. 11 H. and L. Co.	1898	North avenue and McMechen street	130x111x172	26,500 00	8,000 00		9,796 00
No. 12 H. and L. Co.	1905	Liberty road and Garrison avenue	100 x 52	21,330 66	1,579 00		6,330 00
No. 13 H. and L. Co.	1906	Carey street, near Hollins	80 x 41	24,156 69	5,231 99		9,279 00
No. 14 H. and L. Co.	1909	Gorsuch avenue, near Harford road	90 x 55	26,746 40	3,395 12		6,244 00
No. 15 H. and L. Co.	1907	Montford avenue and Mura street	100 x 30	20,859 74	3,003 63		5,796 00
No. 16 H. and L. Co.	1908	Calvert and Read streets	40 x165	38,534 12	8,081 45		9,199 00
No. 17 H. and L. Co.	1901	See No. 22 Engine Company					4,854 00
No. 18 H. and L. Co.	1912	See No. 20 Engine Company					5,435 00
No. 1 Hose Co.	1912	See No. 2 Water Tower Company					12,945 00
No. 2 Hose Co.	1912	See No. 2 Truck Company					12,745 00
No. 1 Water Tower	1891	See No. 15 Engine Company					9,347 25
No. 2 Water Tower	1908	South Gay street, near Baltimore	33-7 x 97-2½	24,113 81	10,647 60		10,752 00
Repair Shop	1912	Market Place and Baltimore street					15,206 00
Storeroom		See No. 15 Engine Company					3,000 00
Telegraph Department	1859	City Hall					348,391 31
Vacant property	1859	Harrison street, near Fayette	106 x 25	10,000 00	2,000 00	100 00	
Vacant property	1880	Biddle street, near Druid Hill avenue	150 x 30	10,000 00	9,500 00		
Vacant property	1888	Mary street, near [illegible]	20 x 75	3,000 00	1,800 00	72 00	
Vacant property	1888	Belair road, near B. & O. crossing	110 x 40	5,000 00	1,900 00	40 00	
Vacant property	1900	Brunswick street, near Frederick avenue	85 x 41	3,000 00	4,125 00	61 50	
Vacant property	1911	Light and Montgomery streets	32 x100		7,706 65		
Vacant property	1911	Fulton avenue and Baker street	37½x142-3		7,197 50		
		Total estimated valuation of lots, buildings and equipment		$1,154,541 78	$337,169 61	$1,028 75	$2,257,707 88

(a) Represents total cost of Pipe Line System to December 31, 1913.
(b) Actual cost.
(c) Fireboat "Cataract."
(d) Fireboat "Deluge."

SALARIES OF OFFICERS AND MEMBERS.

Fire Department.

		PER ANNUM
1	Chief Engineer	$2,750.00
1	Deputy Chief Engineer	2,000.00
8	District Engineers, each	1,500.00
1	Superintendent of Machinery	1,500.00
1	Assistant Superintendent of Machinery	1,200.00
1	Captain commanding Marine Division	1,400.00
49	Captains of engine and truck companies, each	1,200.00
64	Lieutenants of engine and truck companies, each	1,075.00
41	Enginemen, each	1,150.00
48	Assistant enginemen, each	1,000.00
4	Pilots	1,000.00
12	Tillermen of truck companies, each	950.00
12	Assistant tillermen of truck companies, each	950.00
56	Hostlers of engine and truck companies, each	950.00
50	Assistant hostlers of engine and truck companies, each	950.00
276	Pipemen, each	900.00
108	Laddermen, each	900.00
11	Stokers on fire boat and pumping station, each	900.00
20	Probationary firemen, each	600.00

Repair Shop.

1	Blacksmith	1,150.00
3	Machinists, each	1,000.00
1	Woodworker	900.00
1	Painter	1,000.00
3	Helpers, each	900.00

Fire Alarm Telegraph Department.

1	Superintendent of Telegraph	2,000.00
6	Telegraph operators, each	1,100.00
4	Telephone operators, each	840.00
1	Lineman	1,200.00
4	Assistant linemen, each	1,000.00
1	Batteryman	1,000.00
790	Total.	

MANUAL FORCE OF THE DEPARTMENT.

OFFICERS.

Chief Engineer	1
Deputy Chief Engineer	1
District Engineers	8
Superintendent of Machinery	1
Assistant Superintendent of Machinery	1

ENGINE COMPANIES.

No.	1	Engine	Company	12
"	2	"	"	12
"	3	"	"	12
"	4	"	"	12
"	5	"	"	12
"	6	"	"	12
"	7	"	"	12
"	8	"	"	12
"	9	"	"	12
"	10	"	"	12
"	11	"	"	12
"	12	"	"	12
"	13	"	"	12
"	14	"	"	12
"	15	"	"	22
"	16	"	"	12
"	17	"	"	12
"	18	"	"	12
"	19	"	"	12
"	20	"	"	12
"	21	"	"	12
"	22	"	"	12
"	23	"	"	12
"	24	"	"	12
"	25	"	"	12
"	26	"	"	12
"	27	"	"	12
"	28	"	"	12
"	29	"	"	12
"	30	"	"	12
"	31	"	"	12
"	32	"	"	12

No. 33	Engine Company	12
“ 34	“ “	12
“ 35	“ “	12
“ 36	“ “	12
“ 37	“ “	12
“ 38	“ “	12
“ 39	“ “	20
“ 40	“ “	11

Hook and Ladder Companies.

No. 1	Truck Company	12
“ 2	“ “	12
“ 3	“ “	12
“ 4	“ “	12
“ 5	“ “	12
“ 6	“ “	12
“ 7	“ “	8
“ 8	“ “	8
“ 9	“ “	8
“ 10	“ “	13
“ 11	“ “	12
“ 12	“ “	8
“ 13	“ “	12
“ 14	“ “	8
“ 15	“ “	12
“ 16	“ “	12
“ 17	“ “	12
“ 18	“ “	8
“ 1	Hose Company	12
“ 2	“ “	12
No. 1	Water Tower	4
“ 2	“ “	5
Pumping Station		9
Repair Shop		9
Fire Alarm Telegraph Department		17
		770
Probationary firemen		20
Total active membership of the Department		790
Disabled members pensioned		53
Total membership		843

VACATIONS.

Vacations are granted members of the uniformed force as follows:

FIRE DEPARTMENT.

Chief Engineer—Thirty-one days.

Deputy Chief Engineer—Twenty-one days.

District Engineers, Superintendent of Machinery, Assistant Superintendent of Machinery and captain commanding Marine Division—Eighteen days.

Captains and lieutenants—Fourteen days.

All other members—Twelve days.

FIRE ALARM TELEGRAPH.

Superintendent of Telegraph—Twenty-one days.

Telegraph operators—Fourteen days.

Telephone operators—Fourteen days.

Lineman—Fourteen days.

Assistant linemen—Twelve days.

Batteryman—Twelve days.

HOLIDAYS.

All members of uniformed force granted one day holiday each week.

INJURED AND SICK.

All members attended by Department surgeon while on injured or sick leave at expense of Department.

PENSIONS.

Baltimore City Charter, 1900, *Section* 70—"The Board of Fire Commissioners of the City of Baltimore may retire from office in the Fire Department any permanent or call member thereof who has become permanently disabled while in the actual performance of duty, or who has performed faithful service in the Department for a period of not less than twenty consecutive years, or who may become unable to perform further service by reason of age or other physical or mental disabilities, and place the member so retired upon a pension roll; and said Board may also provide for the relief of the widows and children of firemen who may be killed in the discharge of duty. The amount of such annual pension to be allowed by said Board of Fire Commissioners to each pensioner shall be equal to one-half the yearly amount then being received by him for service in said Department at the time of such retirement per annum, payable in monthly installments."

PENSION ROLL.

NAME.	POSITION AT TIME OF RETIREMENT.	AMOUNT OF ANNUAL PENSION.
George W. Horton	Chief Engineer	$1,375.00
William M. Dunn	District Engineer	400.00
George W. Foxwell	Captain	600.00
John Hoffman	Captain	600.00
George C. Young	Captain	600.00
Samuel R. Watkins	Captain	600.00
Charles Betz	Captain	600.00
John Eigenbrodt	Captain	600.00
Frederick W. Johnston	Captain	600.00
John Prenger	Captain	600.00
Louis A. Tuckerman	Lieutenant	537.50
Charles Rosenthal	Lieutenant	537.50
Edward C. Klessel	Lieutenant	537.50
William H. Taylor	Lieutenant	475.00
Frederick L. Nelson	Engineman	550.00
John W. Walsh	Engineman	575.00
Charles Freeburger	Engineman	575.00
William Welsh	Engineman	575.00
Robert Kain	Batteryman	500.00
James B. Kelly	Tillerman	475.00
John J. Purcell	Tillerman	450.00
William Wiley	Hostler	475.00
John Wernsing	Hostler	450.00
Joseph Lavender	Hostler	450.00
Joseph W. Moon	Hostler	450.00
Mark Hill	Hostler	450.00
Christian Freyer	Hostler	450.00

PENSION ROLL—*Continued.*

NAME.	POSITION AT TIME OF RETIREMENT.	AMOUNT OF ANNUAL PENSION.
John W. Potts	Hostler	$450.00
John F. Peerce	Hostler	450.00
Louis Matthaei	Hostler	475.00
Charles Airey	Assistant Hostler	475.00
William Gordon	Callman	400.00
John H. Gildea	Callman	400.00
C. Allen Orem	Pipeman	450.00
George H. Little	Pipeman	400.00
Solomon Uhlfelder	Pipeman	400.00
Charles A. Soistman	Pipeman	400.00
John J. Flynn	Pipeman	400.00
Charles H. Baker	Pipeman	400.00
Albert Oelman	Pipeman	400.00
John N. Downs	Pipeman	400.00
Wilbur Pearce	Pipeman	450.00
Albert H. Gier	Pipeman	450.00
John G. Keilholtz	Pipeman	450.00
Charles P. Griffin	Pipeman	450.00
William Eckert	Pipeman	450.00
James Catterton	Pipeman	450.00
John T. Seabreeze	Pipeman	450.00
J. H. Hoey	Pipeman	450.00
John T. Elliott	Ladderman	400.00
Russel M. Brown	Ladderman	400.00
John F. Mackenzie	Ladderman	450.00
William White	Ladderman	400.00

HIGH PRESSURE SERVICE

HIGH PRESSURE PUMPING STATION—EQUIPMENT.

PUMPS.

NUMBER AND MAKE.	Class.	Diameter in Inches.		Revolutions per Minute.	Gallons per Minute.
		Steam Cylinders.	Stroke, Inches.		
3 Allis-Chalmers	Horizontal, Corliss, twin, simple, non-condensing, crank and fly-wheel	22	36	87½	7,000
1 Epping-Carpenter	Horizontal, duplex, direct-acting, compound, non-condensing	14 and 25	16	32	1,000

HIGH PRESSURE PUMPING STATION—EQUIPMENT—*Continued.*

BOILERS.

NUMBER AND MAKE.	Type.	Grate Surface, Square Feet.	Heating Surface, Square Feet.	Rated Horsepower, Each.	Steam Pressure.		Fuel.
					Maximum Allowed.	Average.	
4 Edge Moor..................	Inclined water-tube, with under-feed Jones' mechanical stokers....	110	6,800	1,160	200	150	Bituminous Coal.

High Pressure Service.

The area covered by the mains of the pipe line system of the High Pressure Fire Service is bounded by Pratt, Eutaw, Franklin, Howard, Saratoga, Gay, Baltimore and South streets and covers about 170 acres. The total length of the mains is 8.856 miles and consists of .066 mile of 30-inch, .025 mile of 24-inch, 3.24 miles of 16-inch and 5.30 miles of 10-inch, as well as 2 miles of 8-inch used as hydrant branches.

All pipe is lap-welded, soft, open hearth steel, designed for a maximum working pressure of 300 pounds per square inch. The 8, 10 and 16 inch pipes are 7-16 inch thick, and the 24-inch pipe is ½ inch thick; the standard length is 20 feet.

The pipe lines, including valves, hydrants and other fittings, were tested and made tight before backfilling, at a pressure of 600 pounds per square inch.

All valves are generally located on property lines, ordinarily four at each street intersection, so that, in all but two or three cases, any single side of a block may be cut out of service without interfering with the operation of the system at any time.

The hydrants are of a specially designed flush type. Hydrants are provided with sidewalk cover, upon removal of which there can be connected the portable service head, which locks into position by a single turn. Heads have four 2½-inch outlets, each provided with a regulating valve, so designed to act as a shut-off valve, with outlet in top of head for monitor nozzle directly thereto. The total number of hydrants in the system is 226. Hydrants are located between street intersections, between corners of building lines and curb corners, at alley intersections and alternating on opposite sides of streets.

A "Jumbo" monitor nozzle, with 2½-inch, 3-inch, 3½-inch and 4-inch tips, with a capacity of 7,000 gallons of water per minute, which can be operated by one man, is provided for direct connection on hydrant for the heaviest fire duty.

Fresh water is used in the system, with harbor suction and connections for fireboats, in the event of a break in the water supply or in the event of the pumping station being shut down from any cause.

The crew assigned to the pumping station is taken from members of the Fire Department and is operated as a regular fire company, under charge of a captain and absolute control of the Board of Fire Commissioners.

DESCRIPTION OF ENGINES.

Engines.	Built by.	When Built.	Rebuilt by.	When Rebuilt.	Size.	Cylinders		Pumps		Boilers		Gallons per Minute.	Weight as Drawn to Fires.	Style of Engine.
						Diam.	Strokes.	Diam.	Strokes.	Diam.	Height.			
No. 1	La France Co.	1908	....	....	1st	8¾	9	5¼	9	36	68	1,000	10,400	Vertical, crane-neck, piston double.
“ 2	Ahrens Co.	1909	....	....	1st	9	8	5½	8	38	68	1,000	10,400	“ “ “ “
“ 3	La France Co.	1906	....	....	1st	8¾	9	5¼	9	38	68	1,000	10,400	“ “ “ “
“ 4	Ahrens Co.	1908	....	....	1st	9	8	5½	8	38	68	1,000	10,400	“ “ “ “
† “ 5	La France Co.	1890	Com. Lad. Co.	1910	2d	8¼	8	4¾	8	34	62	700	8,500	“ “ “ “
“ 6	La France Co.	1901	....	....	1st	8¾	9	5¼	9	36	68	1,000	10,400	“ “ “ “
“ 7	La France Co.	1903	....	....	1st	8¾	9	5¼	9	36	68	1,000	10,400	“ “ “ “
“ 8	La France Co.	1888	La France Co.	1904	3d	8⅛	6	4⅞	6	32	60	600	7,100	“ “ “ “
“ 9	La France Co.	1903	....	....	1st	8¾	9	5¼	9	36	68	1,000	10,400	“ “ “ “
“ 10	La France Co.	1901	....	....	1st	8¾	9	5¼	9	36	68	1,000	10,400	“ “ “ “
“ 11	La France Co.	1911	Asa La Frc. Co.	1911	2d	8¾	8	4¾	8	34	62	700	8,400	“ “ “ “
“ 12	La France Co.	1905	....	....	1st	8¾	9	5¼	9	36	68	1,000	10,400	“ “ “ “
“ 13	La France Co.	1908	....	....	1st	8¾	9	5¼	9	36	68	1,000	10,400	“ “ “ “
“ 14	La France Co.	1899	....	....	1st	8½	9	5¼	9	36	66	1,000	10,400	“ “ “ “
“ 15	La France Co.	1904	....	....	1st	8¾	9	5¼	9	36	68	1,000	10,400	“ “ “ “
* “ 16	Hull—Brusstar Bros. Pump—Thos. Manning Engine—E. J. Codd Co.	1891	J. E. Woodall Co.	1897	....	16	10	9	10	....	....	4,400	....	Double vertical pumps.
“ 17	La France Co.	1895	....	....	2d	7¾	9	4½	9	33	62	700	8,700	Vertical, crane-neck, piston double.
“ 18	La France Co.	1908	....	....	1st	8¾	9	5¼	9	36	68	1,000	10,400	“ “ “ “

“ 19	Amoskeag Co.	1908	....	....	1st	8¾	8	5	8	36	66	900	10,400	Vertical, crane-neck, piston double.
“ 20	La France Co.	1897	....	....	3d	7½	8	4¼	8	30	60	650	8,950	“ “ “ “
“ 21	La France Co.	1905	....	....	2d	8	9	4¾	9	34	64	750	8,900	“ “ “ “
“ 22	La France Co.	1891	....	....	3d	7⅜	8	4⅛	8	30	60	600	7,120	“ “ “ “
“ 23	Ahrens Co.	1909	....	....	1st	9	8	5½	8	38	68	1,000	10,400	“ “ “ “
“ 24	La France Co.	1886	La France Co.	1898	3d	7¾	8	4⅜	8	30	64	650	7,500	“ “ “ “
“ 25	La France Co.	1898	....	....	2d	8	9	4⅝	9	33	62	700	8,000	“ “ “ “
“ 26	La France Co.	1905	....	....	1st	8¾	9	5¼	9	36	68	1,000	10,400	“ “ “ “
“ 27	La France Co.	1908	....	....	1st	8¾	9	5¼	9	36	68	1,000	10,400	“ “ “ “
“ 28	La France Co.	1906	....	....	1st	8¾	9	5¼	9	38	68	1,000	10,400	“ “ “ “
“ 29	La France Co.	1894	....	....	2d	7¾	9	4½	9	33	62	700	8,660	“ “ “ “
“ 30	Clapp & Jones	1888	La France Co.	1904	3d	7	7	4⅜	7	32	60	600	6,990	“ “ “ “
“ 31	La France Co.	1893	....	....	3d	7⅜	8	4⅛	8	30	60	600	7,000	“ “ “ “
† “ 32	La France Co.	1910	....	....	1st	8¾	9	5¼	9	38	68	1,000	10,400	“ “ “ “
“ 33	La France Co.	1905	....	....	1st	8¾	9	5¼	9	36	68	1,000	10,400	“ “ “ “
“ 34	La France Co.	1910	....	....	1st	8¾	9	5¼	9	38	68	1,000	10,400	“ “ “ “
“ 36	La France Co.	1895	....	....	3d	7⅜	8	4⅛	8	30	60	600	7,100	“ “ “ “
“ 37	La France Co.	1910	....	....	1st	8¾	9	5¼	9	38	68	1,000	10,400	“ “ “ “
“ 38	Ahrens Co.	1909	....	....	1st	9	8	5½	8	38	68	1,000	10,400	“ “ “ “
* “ 39	Wm. Skinner S.B.&D.D.Co.	1911	....	....	.....	20	20	.....	...	12	11½	12,000	....	Centrifugal, turbine-driven pumps.
**A	La France Co.	1898	....	....	1st	8½	9	5¼	9	36	66	900	10,400	Vertical, crane-neck, piston double.
**B	La France Co.	1893	....	....	2d	8¼	8	4¾	8	33	62	600	8,200	“ “ “ “
**C	Clapp & Jones	1886	La France Co.	1897	2d	7½	7	4¾	7	32	62	600	7,180	“ “ “ “
**D	La France Co.	1889	La France Co.	1904	1st	8¼	8	5¼	8	36	60	900	9,600	“ “ “ “
**E	Ives Bros.	1874	La France Co.	1904	1st	8½	10	5	10	38	64	900	10,760	“ “ “ “
**F	Silsby Mfg. Co.	1887	....	....	3d	Rotary		.....	...	34	60	600	6,700	Rotary, crane-neck.
**G	Clapp & Jones	1885	....	....	3d	6¼	7	3¾	7	32	60	500	6,700	Horizontal, straight frame, piston double.
**H	Ives Bros.	1875	La France Co.	1883	1st	8½	9	5¼	9	36	62	900	10,400	Horizontal, straight frame, piston double.

*Fireboats. ** Reserve. †Auto Tractors.

COMBINATION HOSE WAGONS IN SERVICE.

	Automobiles.	Horse Drawn.	Hose Carriages.
Engine Company No. 1	..	2	..
" " " 2	..	2	..
" " " 3	..	2	..
" " " 4	1	1	..
" " " 5	1	..	..
" " " 6	..	2	..
" " " 7	..	2	..
" " " 8	1	..	..
" " " 9	1	..	1
" " " 10	..	1	1
" " " 11	..	2	..
" " " 12	..	1	1
" " " 13	..	2	..
" " " 14	..	2	..
" " " 15	..	1	..
" " " 15-2	..	1	..
" " " 17	..	1	1
" " " 18	1	1	..
" " " 19	1	1	..
" " " 20	..	2	..
" " " 21	..	1	1
" " " 22	..	1	1
" " " 23	..	2	..
" " " 24	..	1	..
" " " 25	1	1	..
" " " 26	..	1	1
" " " 27	..	2	..
" " " 28	..	1	..
" " " 29	..	1	1
" " " 30	..	1	1
" " " 31	..	1	..
" " " 32	1	1	..
" " " 33	..	1	..
" " " 34	..	1	1
" " " 36	..	1	1
" " " 37	..	1	..
" " " 38	..	1	..
" " " 40	1	..	..
Hose Company No. 1	1	..	..
" " " 2	1	..	..
	11	45	11

Auto combination hose wagon in reserve, 1.

Combination hose wagons in reserve, 2.

HOOK AND LADDER TRUCKS IN SERVICE.

Companies.			Description.
*No. 1	Hook and Ladder	Company.	1 first-size Hayes aerial truck
" 2	"	"	1 " " " "
" 3	"	"	1 second-size Hayes aerial truck.
" 4	"	"	1 first-size Hayes aerial truck.
" 5	"	"	1 " " " "
" 6	"	"	1 " " " "
" 7	"	"	1 combination Holloway truck.
" 8	"	"	1 " " "
" 9	"	"	1 combination American La France truck.
" 10	"	"	1 second-size Hayes aerial truck.
" 11	"	"	1 first-size Hayes aerial truck.
" 12	"	"	1 combination American La France truck.
" 13	"	"	1 first-size Hayes aerial truck.
" 14	"	"	1 combination American La France truck.
" 15	"	"	1 second-size Hayes aerial truck.
" 16	"	"	1 first-size Hayes aerial truck.
" 17	"	"	1 second-size Hayes aerial truck.
" 18	"	"	1 combination Balto. type truck.

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* Auto tractor.

HOOK AND LADDER TRUCKS IN RESERVE.

1 first-size Hayes aerial truck.
2 second-size Hayes aerial trucks.
1 third-size Hayes aerial truck.
1 combination Holloway truck.

FIREBOATS IN SERVICE.

Deluge—Length, 120 feet; beam, 28 feet; draft, 10 feet; capacity, 12,000 gallons per minute.

Cataract—Length, 86 feet; beam, 20 feet; draft, 10 feet; capacity, 4,000 gallons per minute.

WATER TOWERS IN SERVICE.

One 65-foot Hale water tower.
One 55-foot Hale water tower.

FUEL WAGONS.

Two three-horse wagons.
Seven two-horse wagons.

OFFICERS.

Five White gasoline automobiles.
One Buick automobile.
One Overland automobile.
One Studebaker automobile.
Five Concord wagons in service.

RESERVE.

One White automobile.
Nine Concord wagons.

FIRE ALARM TELEGRAPH DEPARTMENT.

Four lineman's wagons.
Two construction trucks.
One Superintendent's carriage.

MISCELLANEOUS.

One White automobile fireman's ambulance.
One White automobile supply truck.
One Mack automobile supply truck.
One horse-drawn supply truck.
One horse-drawn horse ambulance.
Two commissioners' carriages.

CHEMICAL ENGINES IN RESERVE.

One double 85-gallon Holloway chemical engine.

HOSE IN SERVICE.

COMPANY.	2½-Inch Cotton, Rubber-Lined Hose.	2½-Inch Rubber Hose.	3-Inch Cotton, Rubber-Lined Hose.	3½-Inch Cotton, Rubber-Lined Hose.	¾-Inch Chemical Hose.
No. 1 Engine Company..	2,850	100	....	....	400
“ 2 “ “ ..	3,200	....	....	....	500
“ 3 “ “ ..	3,250	....	....	....	446
“ 4 “ “ ..	3,500	....	....	....	450
“ 5 “ “ ..	2,100	....	....	....	250
“ 6 “ “ ..	3,000	....	....	....	450
“ 7 “ “ ..	3,400	....	....	....	500
“ 8 “ “ ..	2,600	....	....	....	250
“ 9 “ “ ..	2,800	....	....	....	250
“ 10 “ “ ..	2,700	....	....	....	250
“ 11 “ “ ..	2,200	700	....	....	500
“ 12 “ “ ..	2,850	....	....	....	250
“ 13 “ “ ..	3,050	....	....	....	250
“ 14 “ “ ..	2,600	....	....	....	250
“ 15 “ “ ..	4,400	200	....	....	250
“ 16 “ “ ..	1,250	....	1,000	....	....
“ 17 “ “ ..	2,750	....	....	....	250
“ 18 “ “ ..	3,250	....	....	....	450
“ 19 “ “ ..	3,000	....	....	....	500
“ 20 “ “ ..	3,200	....	....	....	450
“ 21 “ “ ..	3,750	....	....	....	250
“ 22 “ “ ..	2,350	600	....	....	250
“ 23 “ “ ..	2,900	100	....	....	500
“ 24 “ “ ..	2,000	....	....	....	250
“ 25 “ “ ..	3,050	....	....	....	250
“ 26 “ “ ..	2,900	....	....	....	250
“ 27 “ “ ..	2,200	100	....	....	450
“ 28 “ “ ..	3,000	....	....	....	500
“ 29 “ “ ..	2,950	....	....	....	250
“ 30 “ “ ..	3,000	....	....	....	250
“ 31 “ “ ..	2,850	....	....	....	250
“ 32 “ “ ..	3·350	....	....	....	500
“ 33 “ “ ..	1,600	....	....	....	250
“ 34 “ “ ..	2,600	....	....	....	250
“ 36 “ “ ..	3,050	....	....	....	250
“ 37 “ “ ..	2,350	....	....	....	250
“ 38 “ “ ..	3,000	....	....	....	250
“ 39 “ “ ..	1,100	....	1,500	....	....
“ 40 “ “ ..	1,950	....	....	....	250

HOSE IN SERVICE—*Continued.*

COMPANY.	2½-Inch Cotton, Rubber-Lined Hose.	2½-Inch Rubber Hose.	3-Inch Cotton, Rubber-Lined Hose.	3½-Inch Cotton, Rubber-Lined Hose.	¾-Inch Chemical Hose.
No. 1 Truck Company...	50	....	....	....	....
“ 2 “ “ ...	50	....	....	....	200
“ 4 “ “ ...	50	....	....	....	....
“ 5 “ “ ...	50	....	....	....	....
“ 7 “ “ ...	850	....	....	....	250
“ 8 “ “ ...	1,500	....	....	....	250
“ 9 “ “ ...	....	....	....	....	250
“ 11 “ “ ...	50	....	....	....	....
“ 12 “ “ ...	1,500	....	....	....	250
“ 13 “ “ ...	50	....	....	....	....
“ 14 “ “ ...	1,500	....	....	....	350
“ 16 “ “ ...	50	....	....	....	....
“ 18 “ “ ...	1,250	....	....	....	250
No. 1 Hose Company....	....	....	4,000	....	....
“ 2 “ “	....	....	4,000	....	....
No. 1 Water Tower.....	....	....	....	213	....
Pumping Station.........	....	300	....	....	....
Total.............	114,850	2,100	10,500	213	14,446

HOSE IN SERVICE—SUMMARY.

YEAR PURCHASED.	2½-Inch Cotton, Rubber - Lined Hose.	2½-Inch Rubber Hose.	3-Inch Cotton, Rubber - Lined Hose.	3½-Inch Cotton, Rubber - Lined Hose.
1895	450	....	....	....
1896	1,200	100	100	....
1897	1,150	....	....	....
1900	1,400	....	200	....
1901	250	....	....	....
1902	550	....	....	....
1903	6,200	....	....	....
1904	40,600	....	....	....
1905	900	....	....	....
1906	13,350	....	....	....
1907	5,300	....	....	....
1908	2,100	....	....	....
1909	13,350	....	....	63
1910	3,350	....	....	75
1911	11,150	....	200	75
1912	6,950	....	8,000	....
1913	6,700	2,000	2,000	....
Total	114,850	2,100	10,500	213

Grand Total 127,663

HORSES.

Officers	8
No. 1 Engine Company	5
" 2 " "	5
" 3 " "	5
" 4 " "	3
" 6 " "	5
" 7 " "	5
" 8 " "	2
" 9 " "	3
" 10 " "	5
" 11 " "	4
" 12 " "	5
" 13 " "	5
" 14 " "	5
" 15 " "	10
" 17 " "	5
" 18 " "	3
" 19 " "	3
" 20 " "	6
" 21 " "	5
" 22 " "	5
" 23 " "	5
" 24 " "	4
" 25 " "	3
" 26 " "	5
" 27 " "	5
" 28 " "	5
" 29 " "	6
" 30 " "	6
" 31 " "	6
" 33 " "	5
" 34 " "	5
" 36 " "	5
" 37 " "	5
" 38 " "	5
No. 2 Truck Company	3
" 3 " "	3
" 4 " "	3
" 5 " "	3
" 6 " "	3

No. 7 Truck Company	3
" 8 " "	3
" 9 " "	3
" 10 " "	3
" 11 " "	3
" 12 " "	3
" 13 " "	3
" 14 " "	3
" 15 " "	3
" 16 " "	3
" 17 " "	3
" 18 " "	3
" 1 Water Tower	3
" 2 " "	3
Fire Alarm Telegraph Department	8
Horses in service	237
Horses in reserve	35
Total	272

Horses died	3
Horses disposed of	15

SERVICES OF COMPANIES AT FIRES.

Companies.	Number of Boxes Company Assigned to Respond.			Responded	Transferred	Feet of 2½" Hose Laid	Feet of 3" Hose Laid.	Tanks Used.	Extinguishers Used.	Number of Times Ladders Used.															Working Time of Engine.		Working Time on Engines.		Working Time on High Pres. Service.		Working Time of Fireboats.		Working Time of Towers.		Working Time of Pumping Sta. H. P. S.		Time Away From Quarters.	
	1st Alarm.	2d Alarm.	3d Alarm.							85'	75'	65'	45'	35'	30'	22'	20'	18'	16'	14'	12'	10'	8'	6'	Hrs.	Min.	Hrs.	Min.	Hrs.	Min.	Hrs.	Min.	Hrs.	Min.	Hrs.	Min.	Hrs.	Min.
No. 1 Engine Company	89	116	130	123	1	27,900		38																	18	15	5		7	15							71	
" 2 " "	94	156	67	127	1	42,550		45																	47	20	3	30	7	50							106	54
" 3 " "	101	81	97	162		24,550		61									2								15	30			2								77	55
" 4 " "	134	141	133	129		27,250		39																	14	30	4	30	1	10							63	15
" 5 " "	84	69	32	131	10	19,250		30																	16	15			1	30							99	10
" 6 " "	90	134	130	135	1	25,400		61										8							20	30											86	5
" 7 " "	93	136	101	140	2	16,800		48																	8		3	15	9	15							85	15
" 8 " "	37	114	80	81	6	8,200		19																	11	30											59	30
" 9 " "	56	108	82	105	2	25,600		42	1							3									17	15	3										86	45
" 10 " "	53	70	111	110		22,000		46																	48												109	
" 11 " "	52	68	30	93		13,600		21																	21	16											51	36
" 12 " "	70	20	17	93	4	31,400		31									1								29	10		30	1	30							80	25
" 13 " "	68	61	78	182	7	18,250		89																	5	10											87	34
" 14 " "	60	40	29	82		14,100		26																	30	43											89	40
" 15 " "	179	166	111	128		40,450		38																	15	50											92	59
" 15-2 " " 2d section				6		4,350																			3	45											11	54
" 16 " " Fire Boat	33	5		8		1,500																									9	30					14	35
" 17 " "	34	19	10	32	10	7,100		11	1									4																			44	9
" 18 " "	81	56	44	92	6	15,450		29										5							7	10											75	15
" 19 " "	54	59	44	51	1	13,000		25									3								21	20											39	2
" 20 " "	41	29	6	39	1	4,750		13																	7	35											32	5
" 21 " "	19	6	9	28	2	5,150		9									2								6												31	30
" 22 " "	25	19	9	50	7	6,050		22																	13												45	35
" 23 " "	124	108	117	128		19,150		27																	16	52			6	30							68	51
" 24 " "	54	58	33	66		11,600		31										3							13	15											41	7
" 25 " "	58	49	66	95	6	18,700		73								6																					170	
" 26 " "	85	33	46	123		34,150		30									4								41	38	1	45									103	31
" 27 " "	71	129	125	99	2	36,300		31									1								16	26	1	15	4	50							53	47
" 28 " "	64	93	92	66		14,500		32												1					10	45											45	
" 29 " "	20	17	7	32		5,050		12	1																4	30											46	19
" 30 " "	22	11	6	24		8,950		13																	20	35											49	3
" 31 " "	36	31	25	34		11,400		13																	6	55											34	30
" 32 " "	101	106	103	95	10	16,770		37																	13	3											77	24
" 33 " "	70	73	65	82	1	12,550		36																	22	20											67	22
" 34 " "	62	51	72	143		16,700		54																	16	14			1	30							85	10
" 35 " "																																						
" 36 " "	45	58	36	63	1	9,250		21									1								45	45											65	25
" 37 " "	39	65	25	86		26,550		16								4									11	30	1	30	1	30							77	5
" 38 " "	53	64	123	112	4	16,700		45																	23	30											77	30
" 39 " "	51			67		15,500	1,000																								24	20					59	20
" 40 " "	31	17	6	21		2,450		10																													24	16
No. 1 Hook and Ladder Co.	163	101	65	116					6	5				42	46	16		52	25		29		20														79	36
" 2 " " " "	223	103	48	153	3				38	11				57	43	34		103			27		22														112	58
" 3 " " " "	89	82	9	158	10				25		2			12	14	48	5	52	40		13	14	30														112	25
" 4 " " " "	52	173	30	124	3				39	5				26	27	12		38		11	16		19														76	11
" 5 " " " "	52	62	48	67	2				3	1				9	26	13		47	10		4		18														67	15
" 6 " " " "	109	30	5	146					20	2				20	33	14		46	19		17		25														132	46
" 7 " " " "	35	19		61		5,750		23	3					5	12		13		2	1	4	11		8													55	34
" 8 " " " "	29	3		23		800								1		5	8			3	4																42	4
" 9 " " " "	19	3		26				5						3	8		4	3	4		4			2													21	52
" 10 " " " "	63	64	13	130	3				19		1			2	4	4		16	5	2	6	8		5													73	57
" 11 " " " "	62	40	11	72	8				14					13	10	3		9	4		5		14														125	10
" 12 " " " "	25	18		10						3							1		1																		11	50
" 13 " " " "	61	69	25	106					40					15	25	9		38	24		14		17														94	25
" 14 " " " "	14	19		20	6	1,900		5	7								5		1		1			1													39	
" 15 " " " "	50	37	15	48					19					5	11	10		19	7		10		12														42	34
" 16 " " " "	49	153	33	71					18	2				13	12	10		19	12		12		9														46	23
" 17 " " " "	29	39	4	38	1				6		1			2	3	10		13		4	2	6	4														31	41
" 18 " " " "	35	33		22		500									2	3	8	5	2		1	1		1													22	10
No. 1 High Pressure Hose Co.	67	78		42			7,150																						10	42							20	51
" 2 " " " "	78	67		62			23,300																						14								29	6
" 1 Water Tower Co.		126	2	7																																	8	23
" 2 " " "		89	21	4																																	4	28
High Pressure Pumping Station	125			98																															33	12		

FIRES IN DIFFERENT STYLES OF BUILDINGS, ETC.

MONTHS.	Brick or Stone.	Frame.	Corrugated Iron.	Other than Buildings.	False Alarms.	Total.
January	154	15	3	10	11	193
February	160	9	1	16	6	192
March	151	15	.....	31	7	204
April	104	11	1	20	10	146
May	129	15	1	28	6	179
June	116	15	.....	26	6	163
July	131	13	1	29	4	178
August	81	8	2	14	1	106
September	98	9	1	23	3	134
October	98	2	1	17	7	125
November	133	16	1	27	4	181
December	141	16	.....	15	5	177
Totals	1,496	144	12	256	70	1,978

SECOND, THIRD AND GENERAL ALARMS OF FIRE DURING 1913.

Box.	Location.	Date.	Alarm.	Alarm.	Alarm.
538	Bush and Wicomico streets	January 2		Third	
564	S. W. cor. Bayard and Carroll streets.	January 10	Second		
6521	S. E. cor. Russell and Aluvian streets.	January 22	Second		
131	East Falls and Eastern avenues	January 24	Second		
414	227 West Baltimore street	February 16	Second		
27	704 North Durham street	February 21		Third	
10-2-5	Brunswick street extended	March 24			Combination
563	1201 South Sharp street	April 27		Third	
816	E. of Harford ave. and B. & O. R. R.	May 11			Combination
561	Foot of Peach alley	May 21		Third	
153	S. W. cor. Fleet and Eden streets	May 25		Third	
147	S. W. cor. Fleet and Eden streets	May 25	Second		
415	N. W. cor. Eutaw and German streets	July 4	Second		
716	Brunswick street extended	July 7	Second		
184	2601-21 Boston street	July 8	Second		
514	423-425 West Pratt street	July 22	Second		
561	S. W. cor. Ostend and Leadenhall streets	August 3	Second		
418	224 North Howard street	September 6	Second		
529	6 and 8 West Lombard street	September 12		Third	
4122	6 and 8 West Lombard street	September 12	Second		
257	Oliver and Aisquith streets	October 22			Combination
197	6 to 12 South Ann street	November 4	Second		
561	Peach alley and Ostend street	November 5	Second		
62	1050 William street	November 7	Second		
8122	Sinclair lane, near Belair road	November 9	Second		
35	915 North Howard street	November 19		Third	
213	810 East Lexington street	November 26			Combination
62	1041 Light street	November 26	Second		
415	306 West Baltimore street	November 17		Third	

SUMMARY OF FIRES FOR THE YEAR 1913.

MONTH.	1st District.	2d District.	3d District.	4th District.	5th District.	6th District.	7th District.	8th District.	Boxes.	Silent.	Special.	Total.
January......	18	18	10	33	11	8	2	8	108	64	21	193
February.....	8	24	11	24	8	12	3	12	102	67	23	192
March.......	14	18	10	17	12	11	8	8	98	85	21	204
April.........	12	15	7	15	8	6	5	8	76	53	17	146
May.........	17	19	10	21	12	10	9	7	105	61	13	179
June.........	10	15	6	16	17	9	8	8	89	54	20	163
July.........	15	12	8	16	14	13	8	3	89	67	22	178
August.......	8	11	5	15	12	8	2	11	72	27	7	106
September....	12	8	3	18	10	8	3	3	65	55	14	134
October......	8	12	4	14	11	10	6	6	71	42	12	125
November....	11	15	12	23	7	15	6	12	101	69	11	181
December....	13	15	13	23	11	13	10	5	103	56	18	177
Totals..	146	182	99	235	133	123	70	91	1079	700	199	1978

FIRES AT WHICH RESCUES WERE MADE.

Sunday, March 9—Box 1426, 2.19 A. M. The family of Mr. Frank Hurwitz, 919 East Baltimore street, whose escape was cut off by fire and smoke, were rescued by the following members of the Department: No. 3 Engine Company, Capt. John Grasmick, Lieut. Louis Harrer, Pipeman William Wambold, Howard H. Elliott, Joseph Deasel, John Banearski, Albert C. Meinschein and Substitute Herbert W. Rider; No. 32 Engine Company, Capt. Robert J. Thompson, Lieut. Joseph F Danaher, Assistant Hostler Frederick W. Joeckel, pipemen James M. Ward, Samuel C. Smith and Edward J. Cavanaugh; No. 1 Truck Company, Capt. James V. McCarron, Tillerman Harry A. Donahoo, Assistant Hostler August C. Hartman, laddermen Joseph H. Daly, Joseph A. Gallion, Gerlack Debus, Albert J. Russell, John Schmidt and Probationer Arthur T. Guntrum.

Wednesday, April 30—Box 847, 5.20 P. M. Mr. John George, age fifty-five years, 112 West Twentieth street, whose escape was cut off by smoke, was rescued by pipemen Reginald V. Hornberger and John J. Roberts, No. 18 Engine Company, by means of an eighteen-foot ladder.

Wednesday, July 9—Box 145, 2.56 A. M. Mr. and Mrs. James Kirschowitz and four children, ages from three to fifteen years, whose escape was cut off by smoke, were taken from the third-story front room windows by means of a thirty-five foot ladder by the following members of No. 1 Truck Company: Lieut. Asa Griffith, Tillerman Harry A. Donahoo, Assistant Tillerman Joseph A. Haskell, Assistant Hostler August C. Hartman, laddermen Joseph A. Gallion, Albert J. Russell and Albert T. Cooper.

Sunday, October 5—Box 7524, 12.27 P. M. Mrs. Emma and Miss Estelle Lyness, 2905 Walbrook avenue, whose escape was cut off by smoke, were assisted down a twenty-five foot ladder from third floor by Pipeman Charles Hesse and Substitute Edward Fox, No. 20 Engine Company and Ladderman John T. Neary, No. 18 Truck Company.

Saturday, October 25—Silent, 1.55 P. M. Charles Carey, colored, age twenty-one years, 611 George street, was overcome by gas in excavation on Baltimore street, near Howard, and was rescued by Acting Lieutenant John C. Luckhardt and Pipeman Joseph P. Lyons, No. 15 Engine Company, and sent to Maryland University Hospital in the Western District Police Ambulance. Captain J. Walter Bradley, No. 2 Truck Company, was overcome by gas and rescued by Lieut. Henry Miller and Pipeman Joseph P. Lyons, No. 15 Engine Company, and Tillerman William C. Talbott and Ladderman John E. Mack, No. 2 Truck Company, and conveyed to Maryland University Hospital in the Western Police Ambulance.

Tuesday, October 28—Box 5226, 4.37 A. M. The family of Mr. Gregory Avado, 224 South Eutaw street, consisting of Mrs. Mary Avado, thirty-six years; Annie, twelve years; Vincent, thirteen years; Mary, six years; Jennie, eight years, and Samuel, nine years, were rescued by Acting Deputy Chief James A. Campbell, Acting Fifth District Engineer Edward Tauber, Capt. William J. McDonald, Lieut. Henry Miller, Assistant Hostler James E. Murphy and Pipeman Joseph P. Lyons, No. 15 Engine Company; Capt. Edgar B. McKnew, No. 27 Engine Company; Lieut. Louis R. Bell, pipemen Charles J. Schalter and A. J. Heird, No. 2 Hose Company; Assistant Hostler Howard O. Ely and Ladderman Henry J. Carle, No. 2 Truck Company, and Pipeman Thomas H. Linthicum, No. 23 Engine Company. Were sent to Maryland University Hospital in the Western and Southern Districts Police ambulances for treatment.

FIRES WHICH WERE ATTENDED BY LOSS OF LIFE.

Monday January 20—Box 428, 8.44 P. M. Mr. George T. Oliver, age fifty-nine years, 1031 West Lexington street, fell down stairs with a lighted coal oil lamp, causing his clothes to catch fire and was burned to death.

Thursday, January 30—Special, 9.50 A. M. Mrs. Mary Purdy, age sixty-nine years, 1009 Sassafras Court, was burned about the entire body and sent to Mercy Hospital in Central District Ambulance, where she died the P. M. of same date. Cause, hot coals igniting dress.

Friday, February 7—Box 381, 12.50 P. M. Mary A. Johnson, age forty-seven years, 1350 North Stricker street, while kindling fire her clothes became ignited and she was burned about the body and face and removed to Maryland Homeopathic Hospital, where she died 6.15 P. M. same date.

Sunday, February 16—Special, 8.40 A. M. Mrs. Lena Schuman, age forty-two years, 120 South Caroline street, was burned about her entire body and sent to the Hebrew Hospital in Eastern District Police Ambulance, where she died at 6 A. M. the 17th instant. Cause, clothes igniting from a gas stove.

Friday, March 7—Silent, 10.55 A. M. Quarantine Anchorage, Patapsco River, Anne Arundel County, Md. The Steamship Alum Chine was blown up in Baltimore Harbor by dynamite explosion. Sinking of Tugboat Atlantic, belonging to Atlantic Transport Company and a railroad barge of the Pennsylvania Railroad Company. Loss of life estimated at sixty persons. Fireboat Deluge rendering assistance.

Wednesday, April 23—Box 517, 9.43 A. M. Russell street and Harmon lane. Mr. George Cox, age twenty-five years, 1710 Pennsylvania avenue, was severely burned about the body and sent to the Maryland University Hospital in the Southern District Ambulance, where he died at 1.10 P. M. same date. Cause, coming in contact with live wire.

Wednesday, May 21—Box 561, 4.35 P. M. Foot of Peach alley. Richard Storrey, of 904 Peach alley, age twenty-seven years, was severely burned about the body, face and hands, and removed to the Maryland University Hospital in the Southern District Police Ambulance, where he died on the 23d instant, from result of his burns.

Thursday, June 12—Special, 5.50 A. M. Elizabeth Williams, colored, age eighty-eight years, 226 North Pine street, was burned about the entire body, and removed to the Maryland University Hospital in the Western District Police Ambulance, where she died the P. M. of the same date. Cause, burning paper.

Sunday, June 15—Box 5321, 3.20 A. M. Mary Curtis, colored, age thirty-one years, 542 Burgundy alley, was severely burned about the body, and was conveyed to the Maryland University Hospital in the Western District Police Ambulance, where she died at 9 A. M. the same date. Cause, coal oil lamp.

Thursday, June 19—Box 541, 6.30 A. M. Della Williams, colored, age twenty-four years, 439 West Henrietta street, was burned about the entire body and removed to the Maryland University Hospital in the Southern District Police Ambulance, where she died at 3 P. M. the same date. Cause, coal oil lamp.

Wednesday, July 2—Box 247, 8.52 A. M. Miss Teresa E. Weber, age thirteen years five months, 2110 East Madison street, employed as a salesgirl at 581 North Gay street, was found on second floor unconscious by Capt. James V. McCarron, acting Second District Chief, who carried her to a ladder at front window and passed her to members of No. 9 Engine and No. 5 Truck Companies. She was removed to St.

Joseph's Hospital by Northeastern District Police Ambulance, where they pronounced her dead. Cause, suffocation.

Tuesday, July 8—Silent, 6.08 P. M. Abraham Cohen, age five years six months, 1610 East Pratt street, was burned about the entire body, and removed to the Hebrew Hospital in the Eastern District Police Ambulance, where he died at 11 P. M. the same date. Cause, playing with gas stove.

Wednesday, July 16—Box 546, 4.19 P. M. Mary Griffis, colored, age eighty-nine years, 1004 Plum alley, was severely burned about the body and removed to the Maryland University Hospital in the Southern District Police Ambulance, where she died at 10.30 P. M. the same date. Cause, smoking pipe in bed.

Tuesday, July 22—Box 8121, 3.26 P. M. Gordon Von Keiman, age five years, and Emmet Von Keiman, age four years, 44 Belair avenue, were found burned to death in the second-story front room by members of the Fire Department. Cause, unknown.

Saturday, August 9—Silent, 6.24 P. M. While building northeast corner Gutman and Montebello avenues was being demolished, Elizabeth Handley, age seven years, 604 Gutman avenue, was caught under wall and killed instantly and found by members of No. 14 Truck Company.

Thursday, September 11—Special, 12.10 P. M. Andrew Schneider, age four years, 1106 Hull street, was burned about the entire body and removed to the Mercy Hospital in the Southern District Police Ambulance, where he died at 7 A. M. the 12th instant. Cause, playing with matches.

Saturday, September 13—Special, 7 P. M. Morris Dubewitz, age seven years, 1303 East Lombard street, was burned about the entire body, and removed to the Hebrew Hospital in the Eastern District Police Ambulance, where he died on the 14th instant. Cause, playing with matches.

Wednesday, October 29—Box 264, 11.31 P. M. Mrs. Jennette Ross, colored, age forty-two years, 521 South Caroline street, was burned about the entire body and removed to St. Joseph's Hospital in the Northeastern District Police Ambulance, where they pronounced her dead. Cause, unknown.

Friday, October 31—Special, 7.35 A. M. John Johnson, age thirty-one years, 1038 Hillen street, was burned about the entire body, and removed to the Mercy Hospital in the Central District Police Ambulance, where he died at 11 A. M. the same date. Cause, unknown.

Tuesday, November 18—Special, 10.30 A. M. Mrs. Mary A. Flynn, age eighty-five years, 701 Scott street, was burned about her entire body, and died while being conveyed to the Franklin Square Hospital in the Southwestern District Police Ambulance. Cause, unknown.

Monday, December 8—Box 623, 5.01 A. M. Mrs. Maggie Buckholtz, age sixty-three years, 1014 South Hanover street, was burned to death, and her body removed to the Morgue in the Western District Police Ambulance. Cause, unknown.

Monday, December 15—Box 159, 11.58 P. M. Mrs Louisa Greenwald, age seventy years, 1608 Fleet street, was burned about her body and limbs and removed to St. Joseph's Hospital in the Eastern District Police Ambulance, where she died at 11 P. M. the 17th instant. Cause, unknown.

Thursday, December 25—Box 175, 6.05 P. M. Mr. Matthew M. Street, age sixty-three years, 334 South Collington avenue, was found burned to death by members of the Fire Department. Cause, unknown.

Saturday, December 27—Box 2422, 7.53 A. M. Abraham Scop, age five years, 903 East Madison street, was burned over the entire body, and removed to the Hebrew Hospital, where he died on January 6, 1914. Cause, explosion of gasoline.

TABLE SHOWING THE DIFFERENT CAUSES OF FIRES AND ALARMS DURING 1913.

Alcohol lamp	1
Back-fire	24
Burning rubbish	32
Building collapsing	2
Burning paper	12
Bonfire	7
Blown fuse	4
Balloon	4
Boiling wax	1
Burning hornets' nest	1
Burning insulation	4
Burning sulphur	1
Burning celluloid	1
Coal oil stove	42
Coal oil heater	15
Coal oil lamp	50
Carboy acid	1
Cigar lighter	1
Defective flue	70
Dynamite explosion	1
Defective wiring	13
Defective peanut roaster	1
Ditch cave-in	1
Electric wire	17
Electric iron	2
Explosion of waterback	1
Electric light	2
Explosion of chemicals	1
Explosion of ammonia tank	1
False alarms	71
Fireworks	2
Friction	1
Fire-pot	1
Gas jet	43
Gas stove	22
Gasoline stove	30
Gasoline	20
Gas heater	3
Gas pipe	1

TABLE SHOWING THE DIFFERENT CAUSES OF FIRES AND ALARMS DURING 1913—*Continued.*

Gas explosion	8
Gas tank	2
Gas iron	4
Gas range	3
Hot coals	6
Hot ashes	13
Hot rivet	1
Hot box	1
Iron heater	1
Incendiary	5
Lighted match	60
Lighted candle	36
Lighted lantern	8
Lighted paper	3
Lighted pipe	1
Lightning	4
Lighted cigarette	1
Lighted torch	5
Overheated stove	32
Overheated stovepipe	23
Overheated boiler	2
Overheated range	7
Overheated furnace	7
Overheated chimney	1
Overheated oven	1
Overheated kiln	3
Overheated stack	3
Pitch boiling over	10
Playing with matches	40
Playing with fire	4
Pan of grease	22
Pilot light	1
Plumber's fire-pot	3
Pan of camphor	1
Painter's torch	1
Rekindle	5
Rivet heater	1
Rear-end collision	2
Soot	87

TABLE SHOWING THE DIFFERENT CAUSES OF FIRES AND ALARMS DURING 1913—*Concluded.*

Sparks	45
Spontaneous combustion	8
Smoking in bed	5
Sulphur boiling over	1
Slacking lime	1
Tinner's pot	3
Thawing water pipe	3
Unknown	866
Unusual smoke	104
Unusual steam	5
Unusual light	9
Unnecessary alarm	3

SERVICE RENDERED BY THE FIRE DEPARTMENT AT FIRES OUTSIDE CITY LIMITS.

March 7, 10.55 *A. M.*—Still alarm, Quarantine Anchorage, Patapsco River. Explosion of dynamite on Steamship Alum Chine. Company in service: Fireboat "Deluge."

March 24, 2.19 *A. M.*—Box 10-2-5, D. B. Martin Company, Union Abattoir, Baltimore County. Companies in service: Engine Companies Nos. 8, 10, 14, 30, 36 and 38, Truck Companies Nos. 8 and 13; District Engineers Nos. 4 and 7; Chief Engineer.

May 3, 11.18 *P. M.*—Box 10-1, American Agricultural Chemical Works, 2272 South Clinton street, Baltimore County; Fertilizer Works. Companies in service: Engine Companies Nos. 11 and 22, Truck Company No. 17, Fireboat "Cataract," District Engineer No. 1.

June 1, 4.11 *P. M.*—Box 544, P. Satisky, Nos. 3-5-7-9-11 Washington road, Baltimore County, general store and dwellings. Companies in service: Engine Companies Nos. 10 and 37, Truck Company No. 13, District Engineer No. 4.

June 13, 9.20 *P. M.*—Still alarm, Martin Wagner Company, Wagner's Point, Anne Arundel County. Companies in service: Fireboat "Deluge," June 13, 9.20 P. M. to June 14, 7.30 A. M.; Fireboat "Cataract," June 14, 11 A. M. to 7 P. M.

July 7, 4.39 *P. M.*—Box 716, D. B. Martin Company, Union Abattoir, Baltimore County. Companies in service: Engine Companies Nos. 10, 14, 30 and 36, Truck Companies Nos. 8 and 13, District Engineers Nos. 4 and 7.

September 27, 8.33 *P. M.*—Box 1925, D. B. Martin & Co., foot Fourth avenue, Canton, Baltimore County; Fertilizer Factory. Companies in service: Engine Companies Nos. 11 and 22, Truck Company No. 17, Fireboat "Deluge," District Engineer No. 1.

NUMBER OF FIRES AND LOSSES EACH YEAR SINCE THE ORGANIZATION OF THE PAID FIRE DEPARTMENT.

YEAR	NUMBER OF FIRES.	LOSSES.
1859	98	$350,000.00
1860	112	310,000.00
1861	115	60,000.00
1862	130	83,000.00
1863	138	120,482.33
1864	143	163,528.49
1865	163	71,358.90
1866	178	181,115.00
1867	193	293,045.00
1868	145	76,244.75
1869	187	398,259.09
1870	203	432,717.07
1871	226	475,391.00
1872	245	300,000.00
1873	265	892,628.58
1874	384	506,826,15
1875	348	608,351.30
1876	332	563,248.78
1877	420	438,715.57
1878	371	162,312.78
1879	306	193,654.54
1880	343	580,290.09
1881	324	454,773.35
1882	358	330,113.84
1883	399	561,520.00
1884	388	617,871.79
1885	474	441,743.00
1886	430	896,527.12
1887	496	1,162,359.26
1888	602	1,272,478.82
1889	545	477,329.07
1890	594	441,152.65
1891	676	650,009.73
1892	795	839,433.77
1893	829	1,153,129.76
1894	831	542,188.29
1895	816	730,751.11
1896	985	423,062.79

NUMBER OF FIRES AND LOSSES EACH YEAR SINCE THE ORGANIZATION OF THE PAID FIRE DEPARTMENT—*Concluded.*

YEAR.	NUMBER OF FIRES.	LOSSES
1897	1,110	$572,497.39
1898	1,375	861,114.77
1899	1,309	438,583.38
1900	1,458	1,084,471.84
1901	1,498	1,499,119.90
1902	1,547	681,968.89
1903	1,522	670,614.61
1904	1,482	501,322.71
1904 Conflagration	(Estimated)	60,000,000.00
1905	1,463	410,273.06
1906	1,373	612,567.75
1907	1,533	890,002.11
1908	1,475	1,125,724.90
1909	1,664	1,328,615.33
1910	1,603	792,942.13
1911	1,663	565,926.41
1912	1,947 (Estimated)	306,200.00
1913	1,978 (Estimated)	500,000.00

FIRE DEPARTMENT INSPECTIONS.

Company.	Building Laws.		Fire Prevention Law.	
	Inspections.	Reports Violations.	Inspection.	Reports Violations.
No. 1 Engine Company..........	347	20	127	30
" 2 " "	95	30	95	58
" 3 " "	111	46	111	22
" 4 " "	132	7	132	5
" 5 " "	73	10	29	12
" 6 " "	85	23	85	28
" 7 " "	18	7	18	13
" 8 " "	66	6	98	5
" 9 " "	28	2	28	....
" 10 " "	150	2	150	9
" 11 " "	31	3	14	4
" 12 " "	24	4	18	8
" 13 " "	24	5	68	4
" 14 " "	79	2	79	1
" 15 " "	331	29	103	53
" 17 " "	50	1	32	9
" 18 " "	107	23	7	....
" 19 " "	31	....	31	3
" 20 " "	31	20	6	6
" 21 " "	25	3	83	1
" 22 " "	50	1	4	....
" 23 " "	198	27	55	26
" 24 " "	23	3	5	2
" 25 " "	15	3	12	4
" 26 " "	211	56	35	20
" 27 " "	165	87	87	38
" 28 " "	103	40	88	12
" 29 " "	11	....	11	....
" 30 " "	20	2	20	10
" 31 " "	2	1	2	....
" 32 " "	100	32	100	15
" 33 " "	20	....	20	....
" 34 " "	12	7	12	3
" 36 " "	13	....	13	1
" 37 " "	28	5	12	4
" 38 " "	41	6	41	4
" 40 " "	10	3	....	....

FIRE DEPARTMENT INSPECTIONS—*Continued.*

Company.	Building Laws.		Fire Prevention Law.	
	Inspection.	Reports Violations.	Inspection.	Reports Violations.
No. 1 Truck Company..........	80	6	40	15
" 2 " "	193	46	24	21
" 3 " "	115	18	30	....
" 4 " "	125	5	125	12
" 5 " "	24	4	24	2
" 6 " "	77	4	56	14
" 7 " "	2	....	2	....
" 10 " "	33	3	42	1
" 11 " "	78	11	128	10
" 12 " "	10	3	13	3
" 13 " "	58	9	82	12
" 14 " "	19	1	19	....
" 15 " "	16	....	....	....
" 16 " "	65	10	96	18
" 17 " "	45	5	3	....

ROSTER OF THE DEPARTMENT

AND

LOCATION OF COMPANIES

1913

OFFICERS.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation
August Emrich	51	June 13, 1884	Chief Engineer	321 E. Biddle street	Coal dealer.
Levin H. Burkhardt	46	Nov. 3, 1890	Dep. Chf. Engineer	953 Madison avenue	Carpenter.
James T. Dunn	52	April 1, 1890	1st Dist. "	873 W. Fayette street	Molder.
John L. Emerson	45	Jan. 18, 1892	2d " "	1820 E. Lafayette avenue	Painter.
Frederick Branan	66	April 1, 1879	3d " "	324 W. Twenty-first street	Harnessmaker.
E. Louis Shipley	53	July 1, 1891	4th " "	2123 McCulloh street	Shoemaker.
James A. Campbell	49	Jan. 16, 1894	5th " "	503 W. Saratoga street	Stonecutter.
John Kahl	44	Feb. 1, 1894	6th " "	102 Warren avenue	Driver.
Fielding H. Lucas	62	April 1, 1881	7th " "	2946 Clifton avenue	Typefounder.
Michael A. Lind	51	July 13, 1887	8th " "	400 S. Patterson Park ave.	Painter.
Thomas H. Meushaw	57	May 15, 1885	Supt. Machinery	3132 Harford road	Machinist.
John N. Bletzer	50	Jan. 26, 1889	Asst. Supt. Mach.	722 S. Bond street	Machinist.

No. 1 ENGINE COMPANY.—Located on Paca Street, near Mulberry Street.

Organized February 15, 1859.

Name.	Age.	Date of Appointment.	Position.	Residence	Former Occupation.
John Watson	40	Dec. 15, 1897	Captain	942 W. Mulberry street	Carpenter.
Frank H. Carr	38	Dec. 15, 1897	Lieutenant	2556 W. Baltimore street	Steamfitter.
John M. Foard	43	Dec. 15, 1897	Engineman	2638 Guilford avenue	Machinist.
Joseph R. Shea	30	July 1, 1907	Asst. Engineman	28 S. Pulaski street	Pipefitter.
Michael Beine	35	Aug. 5, 1909	Hostler	1134 Scott street	Salvage corps.
William H. Zander	29	Mar. 23, 1911	Asst. Hostler	606 S. Rose street	Boxmaker.
James F. Legg	37	March 15, 1906	Pipeman	844 W. Lexington street	Clerk.
Frederick N. Walther	30	Jan. 1, 1907	Pipeman	1319 Light street	Candymaker.
Joseph N. Doughty	28	March 4, 1908	Pipeman	2940 E. Monument street	Clerk.
Iverson S. Moon	23	Aug. 15, 1912	Pipeman	1631 E. Monument street	Seaman.
William Grauling	23	Feb. 1, 1913	Pipeman	2031 Fleet street	Clerk.
Rudolph M. O'Mara	29	May 3, 1913	Pipeman	506 Brune street	Printer.

No. 2 ENGINE COMPANY.—Located on Barre Street, near Sharp Street.

Organized February 15, 1859.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Theodore G. Groth	36	Feb. 1, 1902	Captain	2545 W. Fairmount avenue	Printer.
Wesley McClean	35	July 1, 1903	Lieutenant	142 W. Cross street	Cabinetmaker.
Patrick Donnelly	45	March 20, 1907	Engineman	436 E. Randall street	Railroad engineer.
Charles M. Potter	45	Feb. 1, 1902	Asst. Engineman	614 E. Fort avenue	Machinist helper.
Frank Hines	48	April 30, 1890	Hostler	936 S. Sharp street	Tinner.
William J. Kronenberg	32	Aug. 11, 1911	Asst. Hostler	1625 Hanover street	Clerk.
William H. Bell	56	May 22, 1894	Pipeman	1144 Cleveland street	Blacksmith.
George D. Shanks	55	Dec. 15, 1896	Pipeman	1107 W. Cross street	Shoemaker.
Robert S. Tate	34	Feb. 1, 1906	Pipeman	17 Mt. Olivet lane	Driver.
John W. Bosley	40	Jan. 1, 1907	Pipeman	1442 S. Charles street	Laborer.
Edward J. McKewen	23	Aug. 16, 1912	Pipeman	1719 E. Pratt street	Sailor.
George E. Linton	27	Oct. 11, 1913	Pipeman	203 Scott street	Woodworker.

No. 3 ENGINE COMPANY.—Located on Lombard Street, near High Street

Organized February 15, 1859.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation
John Grasmick	40	Dec. 24, 1896	Captain	2617 Fairmount avenue	Carpenter.
Louis Harrer	56	Dec. 19, 1892	Lieutenant	223 S. Chester street	Wharf builder.
Joseph P. Whalen	48	July 28, 1896	Engineman	116 S. Ann street	Machinist.
William G. Adams	29	Feb. 1, 1907	Asst. Engineman	3 S. Hare street	Boilermaker.
John Hildwein	35	Mar. 20, 1908	Hostler	1637 Orleans street	Driver.
John H. Wittig	33	Jan. 1, 1907	Asst. Hostler	509 S. Kenwood avenue	Driver.
William Warmbold	40	April 5, 1906	Pipeman	2914 E. Pratt street	Paperhanger.
Howard H. Elliott	30	July 1, 1907	Pipeman	719 N. Caroline street	Painter.
Joseph Deasel	29	April 15, 1910	Pipeman	127 S. Wolfe street	Driver.
Albert C. Meinschein	27	Feb. 8, 1912	Pipeman	417 S. Maderia street	Steamfitter.
Frank Oltman	33	May 20, 1912	Pipeman	2224 Eastern avenue	Ironmolder.
John F. Banearski	26	May 17, 1912	Pipeman	238 S. Ann street	Mariner.
F. W. McCambridge	27	Sept. 30, 1913	Probationer	1440 Patapsco street	Driver.

No. 4 ENGINE COMPANY.—Located on Lexington Street, near North Street.

Organized February 15, 1859.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Eugene Short	46	June 7, 1901	Captain	219 W. Centre street	Hostler.
Frank G. Smith	40	April 1, 1897	Lieutenant	2426 E. Fayette street	Can capper.
Thomas F. Sexton	59	July 1, 1888	Engineman	1645 N. Fulton avenue	Machinist.
George C. Parker	37	Jan. 26, 1912	Asst. Engineman	1716 Crystal avenue	Stationary Engineer.
George Yurek	40	March 13, 1899	Hostler	121 S. Regester street	Brass finisher.
Walter V. Smith	33	Mar. 15, 1906	Asst. Hostler	103 S. Potomac street	Laborer.
Charles E. Smith	33	March 19, 1910	Pipeman	1203 Mosher street	Painter.
David F. Laumaster	29	July 1, 1909	Pipeman	828 N. Bond street	Driver.
William R. Halloran	30	Feb. 7, 1911	Pipeman	1108 Ashland avenue	Laborer.
William Ludloff	31	Sept. 25, 1912	Pipeman	2002 Orleans street	Driver.
John A. Haskie	26	Mar. 12, 1913	Pipeman	317 S. Ann street	Seaman.
George H. Hilgeman	25	Dec. 10, 1911	Pipeman	1706 E. Fayette street	Clerk.
Harry R. Voyce	28	Oct. 21, 1913	Probationer	941 Ensor street	Teamster.

No. 5 ENGINE COMPANY.—Located on Ann Street, near Gough Street

Organized April 1, 1859.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Frederick J. Stroehlein	41	Dec. 15, 1896	Captain	435 N. Kenwood avenue	Clerk.
George E. Wellslager	41	Dec. 15, 1897	Lieutenant	220 N. Patterson Park ave.	Shear cutter.
William L. Sbisa	49	July 28, 1896	Engineman	633 N. Patterson Park ave.	Marine engineer.
Owen M. Boone	39	Oct. 11, 1913	Asst. Engineman	1638 N. Bradford street	Stationary engineer.
Andrew W. German	39	Oct. 1, 1902	Hostler	513 N. Washington street.	Clerk.
Vacancy	....	....	Asst. Hostler	....	....
Bernard E. Weiss	38	Nov. 20, 1903	Pipeman	1805 Gough street	Clerk.
Robert C. Lambdin	31	June 11, 1908	Pipeman	2205 Gough street	Sheet metal worker.
Joshua H. Miller, Jr.	25	Aug. 8, 1910	Pipeman	510 S. Ellwood avenue	Painter.
Joseph A. Barach	25	Feb. 7, 1911	Pipeman	133 S. Curley street	Clerk.
Vincent T. Tacka	32	Mar. 15, 1906	Pipeman	2042 Bank street	Laborer.
Albert L. McDermott	24	Sept. 6, 1912	Pipeman	115 N. Kenwood avenue	Clerk.

No. 6 ENGINE COMPANY.—Located Corner Gay and Ensor Streets.

Organized April 1, 1859.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Joseph A. Dove	35	Oct. 1, 1902	Captain	1217 E. Federal street	Butcher.
Frederick H. Kaufman	41	Sept. 7, 1895	Lieutenant	2010 E. Madison street	Carriagesmith.
Henry G. Neimann	46	May 31, 1903	Engineman	3004 O'Donnell street	Stationary engineer.
Harry M. Efford	27	July 1, 1909	Asst. Engineman	230 N. Luzerne avenue	Marine engineer.
Charles L. Schulte	55	Nov. 10, 1892	Hostler	1221 N. Eden street	Butcher.
Charles A. Edwards	42	June 1, 1898	Asst. Hostler	1913 E. Chase street	Brakeman.
John J. Eslinger	39	March 24, 1903	Pipeman	126 Belnord avenue	Barber.
John J. Connolly	33	Sept. 21, 1905	Pipeman	2204 E. North avenue	Stonecutter.
John Kaiser	38	May 29, 1909	Pipeman	945 N. Washington street	Tailor.
Thomas J. Campbell	27	Sept. 25, 1909	Pipeman	539 N. Washington street	Pipefitter.
William Kroupa	24	April 10, 1912	Pipeman	619 N. Rose street	Tinner.
William Schertler	30	April 16, 1910	Pipeman	2243 Preston Place	Laborer.
John J. Welby	25	July 16, 1913	Probationer	713 Colvin Place	Driver.

No. 7 ENGINE COMPANY.—Located corner Eutaw Street and Druid Hill Avenue.

Organized April 17, 1859.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Frank J. Lavender	42	July 9, 1895	Captain	203 N. Poppleton street	Laborer.
Robert H. Blatchley	43	Feb. 14, 1893	Lieutenant	2616 Greenmount avenue	Painter.
William E. Koontz	43	July 16, 1901	Engineman	2415 Druid Hill avenue	Machinist.
John F. Fitzgerald	31	Oct. 24, 1911	Asst. Engineman	2561 W. Baltimore street	Machinist.
Harman Schminiger	59	April 1, 1890	Hostler	1932 W. Mosher street	Hostler.
Charles J. Satterfield	35	Jan. 15, 1905	Asst. Hostler	1911 E. Preston street	Hospital janitor.
Frank B. Gray	36	Dec. 2, 1903	Pipeman	869 W. Lexington street	Shoecutter.
Samuel H. Cottingham	34	Feb. 16, 1906	Pipeman	2503 Maryland avenue	Soldier.
Edward J. McDonough	32	Aug. 16, 1912	Pipeman	2936 E. Fayette street	Driver.
John Allen	25	Feb. 1, 1913	Pipeman	613 Harvey street	Laborer.
Charles F. Sass	27	April 22, 1912	Pipeman	105 E. Franklin street	Machinist.
John J. Stapleton	26	Aug. 8, 1910	Pipeman	1044 W Lombard street	Railroad fireman.
William L. Doyle	22	Nov. 26, 1913	Probationer	1021 S. Kenwood avenue	Clerk.

No. 8 ENGINE COMPANY.—Located on Lafayette Avenue, near Stricker Street.

Organized March 8, 1871.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
William J. Stewart	62	March 26, 1875	Captain	424 N. Arlington avenue.	Tinner.
James E. McDonnell	37	June 15, 1902	Lieutenant	1605 W. Lombard street	Clerk.
Jacob S. Corns	61	March 1, 1895	Engineman	437 E. North avenue	Machinist.
Joseph L. Chason	38	May 14, 1908	Asst. Engineman	911 Woodley street	Marine engineer.
Michael J. Kennedy	32	Sept. 16, 1904	Hostler	925 W. Franklin street	Driver.
Harry V. Berry	40	Sept. 14, 1907	Asst. Hostler	2123 Hollins street	Truck builder.
Oswald Pueschel	29	Nov. 16, 1907	Pipeman	508 S. Smallwood street	Baker.
George R. Chapman	39	Feb. 16, 1909	Pipeman	132 S. Gilmor street	Telegraph operator.
John J. Bosley	32	Nov. 18, 1909	Pipeman	1716 W. Pratt street	Candymaker.
William G. Hudson	34	April 6, 1912	Pipeman	23 W. Oliver street	Oil-well worker.
Raymond H. Lyeth	28	Sept. 25, 1909	Pipeman	1121 N. Monroe street	Car builder.
Charles H. Weathers	34	May 10, 1913	Pipeman	2526 Francis street	Motorman.

No. 9 ENGINE COMPANY.—Located corner Madison and McDonogh Streets.

Organized March 1, 1872.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Zachariah H. Foote	49	Feb. 26, 1892	Captain	1530 N. Patterson Park ave.	Molder.
John P. Weinknecht	37	Aug. 3, 1901	Lieutenant	2306 E. Fayette street	Bricklayer.
Daniel R. Rogers	67	Feb. 1, 1872	Engineman	1641 Ashland avenue	Machinist.
William H. Waltimyer	44	July 1, 1907	Asst. Engineman	2408 Ashland avenue	Engineer.
Frisby Lloyd	53	Dec. 11, 1896	Hostler	727 N. Chester street	Canmaker.
William Humphreys	35	Aug. 2, 1906	Asst. Hostler	2921 E. Monument street	Fireman.
John Amend	53	Oct. 17, 1892	Pipeman	839 N. Luzerne street	Boxmaker.
Richard V. Pittinger	66	April 1, 1880	Pipeman	533 N. Luzerne street	Carpenter.
Emil Kadan	33	July 1, 1903	Pipeman	444 N. Lakewood avenue.	Tailor.
Charles A. Barnes	27	Feb. 7, 1911	Pipeman	409 N. Lakewood avenue.	Lumber marker.
William A. Wolf	28	May 1, 1910	Pipeman	1710 E. Madison street	Driver.
John C. Richards	42	April 7, 1906	Pipeman	2310 E. Biddle street	Motorman.
John J. Prasch	27	Oct. 22, 1913	Probationer	2216 E. Fayette street	Shipping clerk.

No. 10 ENGINE COMPANY.—Located on Columbia Avenue, near Poppleton Street.

Organized December 16, 1872.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation
George W. Smith	56	May 12, 1890	Captain	903 Columbia avenue	Plumber and gasfitter.
John L. Smith	33	Aug. 5, 1903	Lieutenant	108 Collins avenue	Notion packer.
George C. Lloyd	45	Feb. 19, 1893	Engineman	1213 W. Cross street	Machinist.
Charles A. Fraser	47	March 28, 1898	Asst. Engineman	1405 Hollins street	Machinist.
George Momberger	38	Dec. 1, 1907	Hostler	634 Dover street	Expressman.
John F. Paul	38	Sept. 20, 1903	Asst. Hostler	404 N. Pulaski street	Motorman.
William W. Roach	37	Feb. 4, 1905	Pipeman	1903 W. Lombard street	Salesman.
William H. Risley	39	Feb. 1, 1907	Pipeman	1931 Wilkens avenue	Mariner.
Peter J. Reed	26	Nov. 29, 1909	Pipeman	1222 Carroll street	Molder.
Robert J. Edwards	23	Nov. 15, 1912	Pipeman	1039 Riverside avenue	Mill hand.
James A. Jones	37	May 20, 1912	Pipeman	912 Columbia avenue	Motorman.
George A. Torney	22	April 22, 1912	Pipeman	127 S. Parkin street	Shop hand.

No. 11 ENGINE COMPANY.—Located corner Patterson Park and Eastern Avenues.

Organized December 1, 1874.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation
Howard Travers	38	April 29, 1897	Captain	115 N. Linwood avenue	Weaver.
William S. Couzens	52	Nov. 1, 1897	Lieutenant	1640 N. Bond street	Collarmaker.
John Lindeman	66	April 7, 1889	Engineman	2036 Bank street	Machinist.
John A. Siebig	43	July 1, 1903	Asst. Engineman	107 N. Curley street	Fireman.
Joshua H. Miller	56	Nov. 10, 1885	Hostler	510 S. Ellwood avenue	Cigarmaker.
John H. Liedlich	31	Aug. 5, 1903	Asst. Hostler	213 N. Linwood avenue	Conductor.
Philip Peacock	54	March 1, 1895	Pipeman	2813 Eastern avenue	Tinner.
Andrew A. Albert	46	April 6, 1895	Pipeman	2324 E. North avenue	Hostler.
Edward F. Stanton	38	Aug. 5, 1903	Pipeman	108 N. Potomac street	Ironmolder.
John T. McDonough	32	Jan. 20, 1908	Pipeman	2936 E. Fayette street	Stove mounter.
Leonard L. Sachs	29	March 16, 1908	Pipeman	2330 Orleans street	Ironmolder.
Walter H. Frederick	31	Sept. 25, 1909	Pipeman	1807 Gough street	Driver.
Frederick E. Senf	34	Sept. 16, 1913	Probationer	108 S. Curley street	Metermaker.

No. 12 ENGINE COMPANY.—Located corner Fort and Riverside Avenues.

Organized January 1, 1875.

Name	Age.	Date of Appointment.	Position.	Residence.	Former Occupation
William Kimball	42	March 1, 1895	Captain	101 W. Gittings street	Paperhanger.
Lewis Schleicher	38	Sept. 6, 1899	Lieutenant	1522 Hanover street	Enameler.
Walter L. Carter	36	Jan. 1, 1908	Engineman	23 E. Barney street	Engineer.
Gordon J. Cronin	28	Aug. 8, 1910	Asst. Engineman	1536 Riverside avenue	Machinist.
George L. Krausz	46	Dec. 15, 1897	Hostler	1434 Marshall street	Brushmaker.
Joseph M. Ritmiller	37	Sept. 17, 1910	Asst. Hostler	1417 Patapsco street	Dairyman.
Robert T. Forsythe	46	Feb. 24, 1899	Pipeman	1429 William street	Tinner.
Charles H. Hamilton	39	March 13, 1903	Pipeman	1516 Byrd street	Motorman.
Thomas J. Irwin	31	Sept. 25, 1909	Pipeman	409 Sanders street	Ship carpenter.
John P. Readon	36	Nov. 27, 1909	Pipeman	1232 Hull street	Fireman.
James J. Joyce	28	Jan. 1, 1911	Pipeman	1259 Battery avenue	Pressman.
Allen G. Denny	39	Sept. 9, 1911	Pipeman	1476 Reynolds street	Laborer.

No. 13 ENGINE COMPANY.—Located corner Fremont and Myrtle Avenues.

Organized March 17, 1876.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation
James Nolan	42	May 19, 1893	Captain	221 N. Fremont avenue	Collar maker.
John George	31	Nov. 1, 1906	Lieutenant	242 N. Patterson Park ave.	Cooper.
Frank R. Nehran	48	June 6, 1890	Engineman	1949 Mosher street	Machinist.
John Lesser	39	Nov. 23, 1900	Asst. Engineman	1744 E. Federal street	Ironworker.
William K. White	40	Sept. 5, 1905	Hostler	1932 White street	Driver.
William Propf	35	April 19, 1906	Asst. Hostler	13 Independent avenue	Driver.
Clifton Hedley	41	April 8, 1897	Pipeman	812 N. Fulton avenue	Painter.
George A. Lenz	33	Aug. 5, 1903	Pipeman	1214 Laurens street	Gasfitter.
Frederick W. Scheive	31	Jan. 20, 1908	Pipeman	1731 N. Chester street	Cementer.
Henry F. McShane	29	Jan. 20, 1908	Pipeman	723 E. Chase street	Laborer.
Charles Kelly	36	Dec. 27, 1912	Pipeman	632 Clinton avenue	Salvage corps.
Harry Menikmeir	27	Feb. 1, 1913	Pipeman	121 Scott street	Tin cutter.
Ballard E. Ratcliffe	25	Nov. 26, 1913	Probationer	2503 Oak street	Car conductor.

No. 14 ENGINE COMPANY.—Located on Hollins Street, near Monroe Street.

Organized July 11, 1888.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Jacob F. Rupp	56	June 29, 1888	Captain	2536 W. Baltimore street	Plasterer.
John J. Schlag	46	Nov. 27, 1897	Lieutenant	1146 Scott street	Ironmolder.
John Gaffney	58	April 1, 1880	Engineman	1917 Hollins street	Machinist.
Charles A. Litchfield	39	Dec. 15, 1897	Asst. Engineman	2019 Hollins street	Machinist.
Charles F. Hill	38	Aug. 15, 1909	Hostler	1711 Cole street	Driver.
William E. Schultz	36	Aug. 5, 1903	Asst. Hostler	330 S. Smallwood street	Motorman.
Frank P. Kerr	36	Sept. 19, 1903	Pipeman	2128 W. Baltimore street	Butcher.
Howard A. Davis	29	July 1, 1907	Pipeman	1249 Carroll street	Paperhanger.
M. Fred Winkler	33	July 1, 1911	Pipeman	307 S. Smallwood street	Cooper.
Frank G. Clark	36	April 10, 1912	Pipeman	2215 W. Fayette street	Fireman.
William J. Volkman	26	Feb. 1, 1913	Pipeman	2123 W. Fairmount avenue	Painter.
Harvey H. Baker	32	Dec. 22, 1909	Pipeman	2500 Druid Hill avenue	Elevator dispatcher.

No. 15 ENGINE COMPANY.—Located on Lombard Street, between Howard and Eutaw Streets

Organized April 1, 1890.

Name.	Age.	Date of Appointment	Position.	Residence.	Former Occupation.
William J. McDonald..	45	March 1, 1895..	Captain..........	916 N. Patterson Park ave	Canmaker.
Henry Miller..........	40	Nov. 23, 1900...	Lieutenant........	901 Columbia avenue.....	Driver.
Wade H. Jones.......	36	Nov. 23, 1900...	Lieutenant........	1843 N. Regester street....	Driver.
William F. Awalt.....	52	April 1, 1890..	Engineman........	312 N. Poppleton street...	Machinist.
John T. Dunn.........	26	Nov. 24, 1911..	Asst. Engineman..	2754 Harlem avenue.......	Electrician
David L. Carter.......	34	April 16, 1908...	Asst. Engineman..	703 N. Payson street.....	Clerk.
John L. Schuncke.....	24	July 19, 1912...	Asst. Engineman..	2926 E. Fayette street.....	Machinist.
Charles H. Heinbuck..	44	June 7, 1901..	Hostler	855 W. Lexington street..	Driver.
James E. Murphy.....	29	Jan. 20, 1908...	Asst. Hostler.....	37 N. Bentalou street....	Watchman
Franklin W. Smith...	29	Aug. 5, 1906...	Asst. Hostler....	335 S. Smallwood street..	Car inspector.
John C. Luckhardt....	41	Feb. 21, 1900...	Pipeman	522 S. Potomac street....	Canmaker.
Joseph P. Lyons......	34	Mar. 20, 1908...	Pipeman	2010 Homewood avenue...	Clerk.
John B. Sanner.......	32	Nov. 18, 1909...	Pipeman	402 N. Ann street........	Inspector.
Robert S. Downs.....	39	Dec. 8, 1904...	Pipeman	516 N. Fremont avenue..	Motorman.
Benjamin J. Yichter..	30	Feb. 7, 1911...	Pipeman	2025 E. Fairmount avenue.	Printer.
Frederick J. Loeffler...	29	Jan. 1, 1911...	Pipeman	1900 Montrose avenue.....	Conductor.
Charles A. Williams..	40	April 22, 1912...	Pipeman	2017 Penrose avenue.......	Lineman.
William P. Fritz......	32	Sept. 9, 1911..	Pipeman	2915 Frederick avenue.....	Printer.
Joseph E. McCormick.	24	Mar. 1, 1913...	Pipeman	1025 Homewood avenue....	Driver.
Emil Antos...........	29	Feb. 11, 1913...	Pipeman	426 N. Collington avenue.	Tailor.
Lewellyn W. Nelson..	31	May 16, 1913...	Pipeman	103 N. Fremont avenue..	Elevator operator.
George E. Croucher...	22	July 15, 1913...	Probationer.......	814 S. Robinson street...	Laborer.
John J. Szamski......	31	Dec. 22, 1913...	Probationer.......	2238 Essex street..........	Ironmolder.

No. 16 ENGINE COMPANY (FIRE BOAT).—Located at Pier No. 7, foot of President Street.
Organized March 17, 1895.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Charles H. Wilson	39	Feb. 1, 1907	Lieutenant	817 S. Linwood avenue	Pilot.
Edward Greene	33	Feb. 16, 1912	Mate	2416 Orleans street	Pilot.
Young D. Griffis	45	April 22, 1912	Mate	232 N. Luzerne street	Pilot.
Charles Thompson	47	Feb. 2, 1906	Engineman	938 N. Patterson Park ave.	Marine engineer.
Adam Hoernner	40	Jan. 15, 1905	Asst. Engineman.	809 W. Lexington street	Candymaker.
Nicholas Debinski	35	Aug. 22, 1910	Asst. Engineman.	529 S. Kenwood avenue	Marine engineer.
Edward Kontz	37	Jan. 1, 1912	Asst. Engineman.	509 S. Luzerne street	Marine engineer.
Andrew Gier	30	May 21, 1910	Stoker	518 S. Belnord avenue	Silversmith.
Joe Nelson	40	April 22, 1912	Sub. Act'g Stoker.	2543 Eastern avenue	Stoker.
Thomas Trautfelter	42	May. 10, 1912	Sub. Act'g Stoker.	714 S. Port street	Mariner.
William Siebert	51	Oct. 1, 1897	Pipeman	2408 Fait avenue	Stevedore.
Robert Moritz	44	May 4, 1904	Pipeman	2813 Fait avenue	Mariner.
William Bohlman	24	Aug. 6, 1913	Probationer	411 N. Montford avenue	Wireworker.
Marshall O. Teato	30	Oct. 1, 1913	Probationer	1830 E. Madison street	Clerk.

No. 17 ENGINE COMPANY.—Located corner Fort Avenue and Haubert Street.
Organized March 15, 1895.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
William H. Chester	50	July 21, 1899	Captain	1512 Henry street	Driver.
William F. Feeney	36	July 15, 1901	Lieutenant	1517 Riverside avenue	Boilermaker.
Charles T. Taylor	39	June 1, 1898	Engineman	1512 Hanover street	Machinist.
William J. McKew	26	July 1, 1909	Asst. Engineman.	1423 S. Charles street	Machinist.
Casper Kraft	53	Dec. 9, 1892	Hostler	417 Folsom street	Driver.
Charles H. Wheatley	54	Feb. 26, 1896	Asst. Hostler	1234 Battery avenue	Boilermaker.
John Moeller	46	Oct. 13, 1893	Pipeman	1330 E. Fort avenue	Packer.
Frank A. Kraft	43	July 7, 1894	Pipeman	1521 Light street	Painter.
Joseph Neubert	60	March 1, 1895	Pipeman	1364 Andre street	Electrician.
Charles F. Fay	56	Feb. 14, 1893	Pipeman	21 E. Ostend street	Carpenter.
Frank L. Brendel	28	Mar. 13, 1913	Pipeman	1235 Battery avenue	Candymaker.
Theodore V. Kirby	37	April 16, 1913	Pipeman	503 Bentalou street	Shirt-ironer.

NO. 18 ENGINE COMPANY.—Located on Twenty-first Street, near Maryland Avenue.

Organized February 14, 1893.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
John H Morgan	62	Nov. 29, 1872	Captain	1907 Oak Hill avenue	Paperhanger.
Frank A. Hanssen	44	Dec. 12, 1892	Lieutenant	2151 Huntingdon avenue	Blacksmith.
Daniel H. Weber	54	Aug. 1, 1889	Engineman	2109 Westwood avenue	Machinist.
George E. Osbourne	28	Sept. 11, 1910	Asst. Engineman	512 E. Twentieth street	Engineer.
Walter F. Appleby	28	Jan. 1, 1908	Hostler	2008 Oakley street	Plumber.
Joseph N. Dillhofer	27	Jan. 1, 1911	Asst. Hostler	17 E. Twenty-first street	Conductor.
John A. Frebert	39	Feb. 1, 1906	Pipeman	1810 E. Biddle street	Clerk.
R. V. Hornberger	35	Jan. 16, 1910	Pipeman	1800 N. Bethel street	Steelworker.
Julius Neubert	42	Jan. 1, 1907	Pipeman	1837 Harford avenue	Carpet layer.
Roy J. Sullivan	24	Mar. 13, 1913	Pipeman	633 Gorsuch Avenue	Clerk.
Howard E. Yakel	26	June 16, 1913	Pipeman	1314 Aisquith street	Laborer.
Bernard Sauer	24	April 22, 1913	Pipeman	2613 E. Fayette street	Coremaker.

No. 19 ENGINE COMPANY.—Located corner East North Avenue and Bond Street.

Organized March 16, 1895.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Daniel V. O'Sullivan	37	Nov. 19, 1903	Captain	1208 Greenmount avenue	Clerk.
James H. Wentz	37	Sept. 1, 1898	Lieutenant	305 S. Poppleton street	Stonecutter.
John J. Carr	45	July 30, 1903	Engineman	403 S. Eden street	Marine engineer.
Joseph F. Daly	37	May 17, 1899	Asst. Engineman	1527 E. Madison street	Stoker.
Edward J. Doud	37	Mar. 10, 1907	Hostler	1107 Ashland avenue	Driver.
Louis Lohman	53	Mar. 1, 1895	Asst. Hostler	2042 E. Federal street	Varnisher.
Wm. McKay Morrow	45	Mar. 14, 1895	Pipeman	1723 Aiken street	Paper carrier.
Bartley Halloran	42	Dec. 1, 1900	Pipeman	1318 Wilcox street	Scroll sawyer.
Stephen E. Freeze	27	Mar. 20, 1908	Pipeman	2413 Ashland avenue	Driver.
George W. Schneider	31	Dec. 14, 1906	Pipeman	242 N. Patterson Park ave.	Clerk.
Simon Mueller	28	Jan. 20, 1908	Pipeman	2417 E. Hoffman street	Brass finisher.
Charles Bryan	29	July 19, 1912	Pipeman	1423 E. Monument street	Brakeman.
Robert E. Potts	31	Dec. 22, 1913	Probationer	735 E. Twenty-third street.	Cork cutter.

No. 20 ENGINE COMPANY.—Located at North Avenue and Tenth Street.
Organized December 21, 1896.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
John W. Cook	52	May 7, 1893	Captain	1020 N. Fulton avenue	Baker.
William I. Johns	55	Aug. 3, 1888	Lieutenant	1303 N Central avenue	Bricklayer.
John F. McCully	44	June 7, 1901	Engineman	Belle avenue	Machinist.
George G. Miller	41	Jan. 1, 1907	Asst. Engineman	1733 Thomas avenue	Machinist.
Patrick H. Berthistle	45	Feb. 14, 1893	Hostler	1701 Slingluff avenue	Driver.
Harry A. Davis	29	July 1, 1909	Asst. Hostler	416 Brice street	Bill poster.
Louis N. Streb	45	Aug. 5, 1903	Pipeman	522 Brice street	Stonecutter.
Charles H. Bitzel	32	Feb. 22, 1908	Pipeman	1706 Appleton street	Motorman.
Chas. G. Walterhofer	33	Sept. 26. 1908	Pipeman	1833 Eagle street	Glycerine operator.
Upshur N. Riggs	32	Nov. 11, 1910	Pipeman	1410 Retreat street	Motorman.
Charles Hesse	46	Nov. 3, 1897	Pipeman	1703 Bloomingdale road	Shoemaker.
Lorenzo A. Dolle	27	March 6, 1908	Pipeman	2308 W. Fayette street	Boilermaker.
Edward A. Grimes	29	Sept. 21, 1913	Probationer	1347 N. Gilmor street	Laborer.

No. 21 ENGINE COMPANY.—Located corner Roland Avenue and Union Avenue.
Organized December 15, 1897.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Edward A. Ward	40	March 1, 1895	Captain	658 Columbia avenue	Driver.
William F. Morrow	63	April 1, 1876	Lieutenant	1119 Bolton street	Molder.
Jackson H. Hedrick	48	Dec. 23, 1896	Engineman	2149 Homewood avenue	Machinist.
Frederick A. Robust	34	Aug. 8, 1910	Asst. Engineman	3809 Roland avenue	Machinist.
Thomas R. Wann	45	March 9, 1897	Hostler	250 Roland avenue	Driver.
John C. Yake	41	Jan. 1, 1908	Asst. Hostler	504 Hickory avenue	Driver.
James L. Clarken	54	Aug. 1, 1888	Pipeman	226 Hickory avenue	Driver.
Charles E. Jenkins	30	July 1, 1907	Pipeman	310 W. Twenty-ninth st.	Motorman.
Charles J. Noon	35	Aug. 7, 1907	Pipeman	820 Wellington street	Potter.
Frank J. Blessing	40	Sept. 9, 1911	Pipeman	3415 Falls road	Blacksmith.
Paul F. Laplanche	22	Feb. 11, 1913	Pipeman	1929 W. Franklin street	Motorman.
Conrad R. Helweick	24	March 13, 1913	Pipeman	1935 W. Pratt street	Boilermaker.

No. 22 ENGINE COMPANY.—Located at Linwood Avenue and O'Donnell Street.

Organized July 15, 1901.

Name.	Age.	Date of Appointment.	Position.	Residence	Former Occupation
George E. Croucher	51	March 1, 1888	Captain	1124 S. Potomac street	Canmaker.
William F. Meagher	32	Nov. 17, 1904	Lieutenant	3131 Dillon street	Driver.
George G. Battersby	42	Sept. 1, 1903	Engineman	520 S. Kenwood avenue	Marine engineer.
Andrew S. Webster	27	Nov. 5, 1910	Asst. Engineman.	126 S. Potomac street	Oiler.
Martin Lutz	41	Dec. 1, 1900	Hostler	328 S. Robinson street	Driver.
Albert Wise	34	Feb. 1, 1906	Asst. Hostler	1020 S. Kenwood avenue	Driver.
John F. Curry	46	July 15, 1894	Pipeman	1005 S. Linwood avenue	Stove molder.
Joseph B. Whitney	45	July 1, 1903	Pipeman	3111 Dillon street	Furniture packer.
Anthony Schoepplein	58	June 24, 1891	Pipeman	311 S. Regester street	Cooper.
James C. Kimble	38	March 25, 1905	Pipeman	2815 Eastern avenue	Potter.
John W. Fries	27	Nov. 10, 1910	Pipeman	4 S. Ellwood avenue	Bricklayer.
John F. Michel	41	Oct. 12, 1912	Pipeman	3004 Hudson street	Tailor.

No. 23 ENGINE COMPANY.—Located corner Saratoga and Tyson Streets.

Organized December 1, 1903.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Edward Tauber	47	June 1, 1890	Captain	904 Hollins street	Driver.
John N. Dittman	32	Sept. 18, 1903	Lieutenant	1621 W. Baltimore street	Patternmaker.
Robert R. Higgins	38	May 12, 1899	Engineman	138 N. Collington avenue	Marine engineer.
August F. Myers	32	Nov. 1, 1906	Asst. Engineman.	17 S. Potomac street	Steamfitter.
Henry Spittel	40	Nov. 30, 1900	Hostler	2221 Wilkens avenue	Driver.
Charles J. Miller	38	Feb. 7, 1905	Asst. Hostler	2052 E. Federal street	Stonecutter.
Charles L. Sauerwein	32	July 21, 1904	Pipeman	2416 W. Baltimore street	Cigarmaker.
Louis J. Kisner	31	April 5, 1906	Pipeman	601 Dukeland avenue	Driver.
John J. O'Dea	29	Feb. 21, 1908	Pipeman	525 E. Madison street	Railroad fireman.
Thomas E. Branigan	39	Sept. 11, 1911	Pipeman	416 W. Franklin street	Laborer.
Carl H. Hoehn	27	Aug. 10, 1910	Pipeman	25 S. Hare street	Silver chaser.
Thomas H. Linthicum	27	Aug. 16, 1912	Pipeman	1619 W. Lexington street	Chauffeur.
Chas. W. Hoffmeister	25	Sept. 16, 1913	Probationer.	336 Ashton street	Railroad fireman.

No. 24 ENGINE COMPANY.—Located on North Patterson Park Avenue, near Fayette Street.

Organized July 28, 1904.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
George W. Shipley	56	Nov. 30, 1889	Captain	714 N. Lakewood avenue	Gilder.
Frank Stieneman	35	April 2, 1902	Lieutenant	205 S. Mount street	Electrician.
William T. Hubbard	55	Dec. 7, 1893	Engineman	2735 E. Monument street	Marine engineer.
Edw. R. McCullough	56	May 29, 1896	Asst. Engineman	22 S. Chester street	Machinist.
Charles E. Diver	38	July 6, 1905	Hostler	251 S. Ellwood avenue	Laborer.
Thomas A. Richardson	38	Feb. 1, 1906	Asst. Hostler	702 N. Glover street	Railroad fireman.
Constant Siebert	62	April 5, 1883	Pipeman	400 N. Rose street	Driver.
Charles H. Lambdin	35	Mar. 16, 1906	Pipeman	204 N. Luzerne street	Steamfitter.
Joseph J. Amrhein	41	Jan. 1, 1907	Pipeman	2812 Orleans street	Cooper.
Leonard J. Smelter	35	Nov. 16, 1907	Pipeman	431 N. Kenwood avenue	Shearman.
Charles V. Murray	27	April 16, 1910	Pipeman	543 N. Lakewood avenue	Nurse.
James L. Baroch	41	June 4, 1906	Pipeman	404 N. Streeper street	Tailor.

No. 25 ENGINE COMPANY.—Located corner McCulloh and Gold Streets.

Organized January 11, 1904.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
William R. Bolgiano	53	Dec. 9, 1897	Captain	2111 Madison avenue	Clerk.
William Lamb	51	Aug. 7, 1894	Lieutenant	2500 Druid Hill avenue	Car driver.
Joshua E. Biggs	33	Feb. 1, 1906	Engineman	1224 N. Gilmor street	Engineer.
Homer T. Blanch	26	May 1, 1912	Asst. Engineman	1931 Hollins street	Engineer.
Charles H. Strahler	28	May 25, 1909	Hostler	2436 Ashland avenue	Driver.
John A. Lang, Jr.	28	Jan. 1, 1909	Asst. Hostler	1236 Scott street	Boilermakers' helper.
Charles B. Smith	36	March 20, 1906	Pipeman	2102 Walbrook avenue	Bricklayer.
Robert E. Potts	26	April 22, 1912	Pipeman	225 N. Carrollton avenue	Conductor.
Charles A. Fisher	40	May 20, 1912	Pipeman	2415 E. Chase street	Driver.
William J. Riggs	38	Feb. 1, 1913	Pipeman	2303 Druid Hill avenue	Motorman.
John P. Mathews	30	April 16, 1913	Pipeman	1974 Patterson Place	Lineman.
John S. Zamenski	25	April 22, 1913	Pipeman	1744 Eastern avenue	Tailor.

No. 26 ENGINE COMPANY.—Located corner Leadenhall and West Streets.

Organized January 19, 1906.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Charles E. Donahue...	35	Nov. 23, 1900...	Captain...........	119 W. Clement street....	Clerk.
John B. Hart.........	30	Jan. 15, 1905...	Lieutenant........	2232 W. Fayette street....	Printer.
Laurence T. Rudolph.	41	March 1, 1895...	Engineman.......	1214 S. Charles street.....	Marine engineer.
Nathan T. Poiner.....	40	March 24, 1906...	Asst. Engineman..	1423 Jackson street	Steamfitter.
William E. Crispens*..	26	Oct. 19, 1910...	Hostler	1425 Battery avenue.......	Laborer.
Charles G. Engleman.	27	Aug 12, 1911...	Asst. Hostler.....	231 N. Fulton avenue.....	Driver.
William H. Creighton.	33	Jan. 15, 1905...	Pipeman	1508 Jackson street	Painter.
John J. Rossiter......	35	April 5, 1906...	Pipeman	7 W. Randall street	Clerk.
Henry Hecker.........	30	Jan. 20, 1908...	Pipeman	1018 Sharp street..........	Driver.
Luther H. Rowe......	29	April 26, 1912...	Pipeman	39 E. Barney street......	Motorman.
John S. Hale.........	40	May 20, 1912...	Pipeman	1509 Light street..........	Driver.
William T. Harrison..	30	June 1, 1913...	Pipeman	2414 W. Baltimore street..	Solicitor.

*Reinstated.

No. 27 ENGINE COMPANY.—Located on Columbia Avenue, between Greene and Paca Streets.

Organized June 14, 1906.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Edgar B. McKnew....	37	May 19, 1899...	Captain...........	913 Columbia avenue......	Horseshoer.
Augustus L. Walker..	48	Oct. 8, 1898...	Lieutenant........	813 N. Gilmor street.....	Plumber.
Charles W. Figgs.....	47	Aug. 10, 1901...	Engineman.......	643 Harvey street........	Engineer.
Gerhard W. Nugent...	29	July 1, 1909...	Asst. Engineman..	421 S. Poppleton street...	Machinist.
C. Fred'k Steinwedel..	30	Jan. 1, 1907...	Hostler	522 Brunswick street.....	Motorman.
Joseph A. Krampe....	34	Jan. 1, 1911...	Asst. Hostler.....	1006 Warner street........	Riveter.
John E. Medlar.......	43	March 3, 1904...	Pipeman	1100 W. Cross street......	Railroad conductor.
David M. Hanixman..	40	June 23, 1911...	Pipeman	411 Scott street	Stovefitter.
Albert V. Cramblitt...	28	Dec. 11, 1911...	Pipeman	853 Columbia avenue.....	Machine hand.
Harry H. Assmann....	24	March 28, 1913...	Pipeman	1121 S. Sharp street.......	Driver.
Walter Jarzynski......	28	April 16, 1913...	Pipeman	622 S. Bethel street.......	Driver.
John F. Steadman.....	22	Oct. 1, 1913...	Pipeman	704 Mura street..........	Clerk.

No. 28 ENGINE COMPANY.—Located corner Mt. Royal and Guilford Avenues.

Organized February 1, 1906.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Louis Buhler	40	Jan. 7, 1897	Captain	1620 N. Washington street	Blacksmith.
Giles J. O'Brien	38	Aug. 1, 1902	Lieutenant	1214 E. Preston street	Molder.
George Dippel	37	Jan. 1, 1907	Engineman	31 S. Curley street	Engineer.
Edward Kreager	44	Mar. 1, 1899	Asst. Engineman	2811 Fait avenue	Driver.
Oliver K. Drury	46	May 19, 1901	Hostler	2045 E. Hoffman street	Paperhanger.
John F. Raymond	39	Jan. 2, 1900	Asst. Hostler	1715 Guilford avenue	Hostler.
William F. Liedlich	31	Jan. 15, 1905	Pipeman	1805 N. Bethel street	Baker.
Harvey Fleming	39	Aug. 24, 1905	Pipeman	1820 E. Eager street	Laborer.
Michael J. Kram	52	Dec. 28, 1898	Pipeman	1420 E. Preston street	Cooper.
Wilbur M. Wolf	25	April 19, 1912	Pipeman	1804 Hope street	Laborer.
Frank Sudbrink, Jr.	25	Feb. 1, 1913	Pipeman	1712 N. Castle street	Janitor.
Frank J. Klein	26	June 21, 1913	Pipeman	924 N. Central avenue	Marine fireman.

No. 29 ENGINE COMPANY.—Located on Park Heights Avenue, near Allen Avenue.

Organized August 1, 1907.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Milton R. Quigley	48	Nov. 21, 1897	Captain	4507 Park Heights avenue	Plumber.
George E. McNeil	41	July 28, 1897	Lieutenant	9 Kate avenue	Stoker.
William P. Patterson	37	May 16, 1902	Engineman	12 Allen avenue	Engineer.
William C. Meridith	33	Jan. 1, 1911	Asst. Engineman	1624 Braddish avenue	Stoker.
John G. Geiger	41	Oct. 1, 1903	Hostler	1728 Friendsbury street	Driver.
George A. Lohman	26	Aug. 8, 1910	Asst. Hostler	7 N. Hare street	Barber.
James A. DePuey	51	Oct. 1, 1897	Pipeman	1627 Edmondson avenue	Paperhanger.
Chester A. Bailey	25	Feb. 7, 1911	Pipeman	4510 Pimlico road	Salesman.
Fred'k H. Viehmeyer	53	July 15, 1893	Pipeman	1204 Myrtle avenue	Driver.
Matthew Carroll	55	April 9, 1896	Pipeman	3 Allen avenue	Laborer.
Zachariah T. Sebreeze	65	April 1, 1890	Pipeman	129 N. Ann street	Driver.
James F. Vomastek	26	Feb. 7, 1911	Pipeman	711 Collington avenue	Tailor.

No. 30 ENGINE COMPANY.—Located on Frederick Avenue, near Caton Avenue.
Organized July 6, 1907.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation
Andrew J. Bilson	62	July 2, 1896	Captain	629 N. Carey street	Plasterer.
Harry C. Showacre	44	June 15, 1902	Lieutenant	1938 Hollins street	Carpenter.
William H. Hardy	49	March 1, 1895	Engineman	1903 W. Saratoga street	Machinist.
Bernard Armstrong	36	Jan. 4, 1909	Asst. Engineman	1108 William street	Stationary engineer.
George H. Mills	39	Oct. 19. 1898	Hostler	2 Louden avenue	Driver.
Ralph P. Johnston	38	Oct. 9, 1908	Asst. Hostler	405 N. Stricker street	Horse collar maker.
George E. McParland	30	Dec. 22, 1906	Pipeman	2558 Frederick avenue	Laborer.
Guy S. Ellis	51	July 1, 1898	Pipeman	345 S. Stricker street	Wagon finisher.
William J. Riggs	35	Jan. 15, 1905	Pipeman	2108 Ramsay street	Frame cutter.
Antone Yienger	49	July 23, 1889	Pipeman	1 Brunswick street	Candymaker.
Frank E. Kaiserski	29	Jan. 27, 1912	Pipeman	Cor. Jane and Potter aves.	Woodworker.
Richard M. Keen	31	June 1, 1910	Pipeman	112 N. Payson street	Shoecutter.

No. 31 ENGINE COMPANY.—Located on Greenmount Avenue, near Gorsuch Avenue.
Organized January 1, 1907.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
James A. Clark	48	Aug. 25, 1891	Captain	444 Lorraine avenue	Driver.
Henry F. Boerner	53	March 1, 1895	Lieutenant	723 E. Twenty-second st.	Tinsmith.
John W. Eckhardt	45	Aug. 5, 1890	Engineman	922 Gorsuch avenue	Machinist.
John P. Foote	28	Jan. 1, 1908	Asst. Engineman	2235 E. North avenue	Engineer.
Andrew Kaufman	36	April 12, 1906	Hostler	1451 Homestead street	Boxmaker.
Richard B. Fanning	41	Aug. 1, 1909	Asst. Hostler	2123 Fairmount avenue	Driver.
Frank P. McCarty	45	July 21, 1905	Pipeman	2331 Greenmount avenue	Carpenter.
Eugene Daly	30	April 7, 1906	Pipeman	1808 N. Washington street.	Brass finisher.
A. J. McIntyre, Jr.	26	Dec. 22, 1909	Pipeman	1049 Aisquith street	Driver.
John F. Trageser	23	Dec. 21, 1911	Pipeman	1764 Gorsuch avenue	Shipfitter.
Robert T. Steide	26	Aug. 3, 1912	Pipeman	1639 Carswell street	Silver chaser.
Elmer C. Baker	30	Nov. 11, 1910	Pipeman	1833 Aiken street	Driver.

No. 32 ENGINE COMPANY.—Located on South Gay Street, between Baltimore and Water Streets.
Organized July 1, 1907.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Robert J. Thompson	34	Oct. 2, 1902	Captain	110 S. Ann street	Electrician.
Joseph F. Danaher	34	Dec. 8, 1904	Lieutenant	32 S. Potomac street	Laborer.
John Stanton	49	March 1, 1895	Engineman	5 N. Luzerne street	Machinist.
Joseph Hecht	37	Aug. 8, 1910	Asst. Engineman	642 S. Lakewood avenue	Engineer.
Milton Montgomery	35	Nov. 23, 1900	Hostler	121 N. Paca street	Electrician.
Frederick W. Jockel	33	March 1, 1907	Asst. Hostler	116 S. Washington street.	Driver.
Geo. A. Sommerman	29	April 16, 1908	Pipeman	2112 E. Hoffman street	Ironmolder.
Harry E. Manns	26	Jan. 1, 1911	Pipeman	633 N. Patterson Park ave.	Marine fireman.
James M. Ward	24	Jan. 27, 1912	Pipeman	321 S. Chester street	Cutter.
Samuel C. Smith	25	Jan. 13, 1911	Pipeman	1317 E. North avenue	Motorman.
Edward J. Cavanaugh.	33	May 25, 1911	Pipeman	1818 Wilkens avenue	Laborer.
Charles C. Woods	30	Feb. 25, 1911	Pipeman	2313 Barclay street	Laborer.

No. 33 ENGINE COMPANY.—Located corner Harford Avenue and Oliver Street.
Organized January 1, 1908.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
John F. Maguire	45	Feb. 7, 1893	Captain	1813 E. North avenue	Shipping clerk.
Clarence A. Kirby	53	Dec. 12, 1896	Lieutenant	2319 E. Federal street	Carpenter.
John Lohnes	39	Jan. 1, 1903	Engineman	2318 E. Preston street	Marine engineer.
Harry T. Cole	44	July 1, 1907	Asst. Engineman	1811 Barclay street	Railroad engineer.
Charles H. Jones	31	Jan. 1, 1908	Hostler	1705 Lamont avenue	Driver.
Howard R. Pyle	41	Jan. 1, 1908	Asst. Hostler	2303 Druid Hill avenue	Fire patrolman.
Henry C. Miller	36	March 10, 1904	Pipeman	1743 N. Milton avenue	Butcher.
George N. Walker	44	March 1, 1899	Pipeman	390 E. Thirty-first street.	Plumber
Harry Daly	25	Sept. 11, 1910	Pipeman	1527 E. Madison street	Blacksmith.
Andrew J. Stuehler	33	March 26, 1911	Pipeman	123 N. Glover street	Tea packer.
Thomas J. Radigan	25	Nov. 19, 1910	Pipeman	1008 E. Eager street	Laborer.
Charles H. Jenkins	24	Jan. 27, 1912	Pipeman	1025 E. Biddle street	Fireman.

No. 34 ENGINE COMPANY.—Located on Caroline Street, near Gough Street.

Organized July 1, 1909.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Wm. C. D. Knight	45	July 10, 1894	Captain	120 N. Kenwood avenue	Driver.
George L. Schlimm	53	April 1, 1888	Lieutenant	231 S. Bond street	Boxmaker.
John P. Cosgrove	39	Feb. 1, 1906	Engineman	2639 Eastern avenue	Machinist's helper.
Godfried Beste	36	March 29, 1912	Asst. Engineman	239 N. Lakewood avenue	Stationary engineer.
John W. Wentz	28	April 16, 1908	Hostler	2047 Gough street	Boilermaker.
Herman W. Hoehn	29	July 1, 1907	Asst. Hostler	23 Belair avenue	Tinner.
Charles E. Hand	29	Aug. 1, 1909	Pipeman	1903 Bank street	Driver.
Thomas Teichman, Jr.	32	July 1, 1909	Pipeman	636 N. Grove street	Molder.
Peter T. O'Dea	27	July 9, 1909	Pipeman	503 N. Exeter street	Laborer.
Christian H. Mattes	31	July 1, 1911	Pipeman	527 S. Lakewood avenue	Laborer.
John C. Silver	31	Feb. 7, 1911	Pipeman	727 N. Spring street	Driver.
William F. Seibert	25	May 4, 1913	Pipeman	21 N. Rose street	Trunkmaker.

No. 36 ENGINE COMPANY.—Located corner Edmondson Avenue and Bentalou Street.

Organized July 1, 1909.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Henry Stagge	48	July 1, 1891	Captain	3328 Edmondson avenue	Ironmolder.
Robert E. O'Keefe	44	June 15, 1902	Lieutenant	611 Ashburton street	Motorman.
Thomas R. G. Milke	34	July 24, 1907	Engineman	2647 Frederick avenue	Stationary engineer.
Walter M. Conway	32	May 21, 1909	Asst. Engineman	1319 Hollins street	Electrician.
Louis J. Fresh	71	Dec. 16, 1872	Hostler	1952 W. Mulberry street	Hostler.
August Ott	37	April 1, 1907	Asst. Hostler	2722 Edmondson avenue	Driver.
Chris. J. Breivogel	39	Jan. 1, 1909	Pipeman	1030 Brantley street	Butcher.
James M. Wilhelm	38	Sept. 11, 1910	Pipeman	826 S. Paca street	Huckster.
John M. Kaiser	27	Jan. 26, 1912	Pipeman	2221 Essex street	Butcher.
Walter R. Welden	27	April 26, 1912	Pipeman	1809 Edmondson avenue	Plumber.
John P. McShane	33	July 19, 1912	Pipeman	723 E. Chase street	Patternmaker.
John G. Grimes	35	Feb. 16, 1909	Pipeman	1431 W. Lafayette avenue	Butcher.

No. 37 ENGINE COMPANY.—Located corner Ridgely and West Streets.

Organized July 1, 1909.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Harry W. Rice	40	Jan. 10, 1899	Captain	2029 Wilkens avenue	Clerk.
Harry C. Fitzgerald	43	Mar. 25, 1904	Engineman	1435 Riverside avenue	Marine engineer.
Walter H. Solloway	28	Jan. 20, 1908	Asst. Engineman	16 W. Henrietta street	Machinist.
Frederick W. Wolff	28	Jan. 1, 1908	Hostler	16 N. Bentalou street	Laborer.
Louis Albert	25	Jan. 1, 1911	Asst. Hostler	2324 E. North avenue	Upholsterer.
Harry Jones	39	Aug. 1, 1909	Pipeman	2564 W. Baltimore street	Dock builder.
Clarence A. Blaney	31	Jan. 1, 1909	Pipeman	733 S. Hanover street	Instructor.
William Warner	45	Oct. 1, 1902	Pipeman	1824 S. Hanover street	Laborer.
Arthur F. Guntrum	24	Feb. 1, 1913	Pipeman	629 Wyeth street	Packer.
Charles J. Keller	23	Feb. 1, 1913	Pipeman	1341 James street	Brassmolder.
John C. Lamparski	29	Sept. 21, 1913	Pipeman	602 S. Montford avenue	Saw-filer.

No. 38 ENGINE COMPANY.—Located on Baltimore Street near Fremont Avenue.

Organized August 10, 1912.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
John B. Bortell	48	Sept. 7, 1888	Captain	834 N. Patterson Park ave.	Ship rigger.
George D. Otter	35	Oct. 1, 1902	Lieutenant	435 E. Fort avenue	Driver.
Jacob Crispens	39	March 11, 1903	Engineman	12 Gorman avenue	Blacksmith.
Harman F. Bode	29	July 1, 1909	Asst. Engineman.	750 McHenry street	Machinist.
John T. Hurley	30	Aug. 1, 1909	Hostler	212 S. Calhoun street	Ironmolder.
Thomas A. Hobbs	28	Nov. 16, 1907	Asst. Hostler	111 S. Poppleton street	Woodworker.
Albert A. Torney	49	May 11, 1897	Pipeman	127 Parkin street	Butcher.
James H. Foley	29	March 15, 1906	Pipeman	1829 Edmondson avenue	Ironmolder.
Walter Filling	38	Oct. 6, 1896	Pipeman	600 S. Smallwood street	Watchman.
Sheldon Chapman	32	Jan. 27, 1912	Pipeman	317 N. Gilmor street	Boilermaker's helper.
Charles W. Zenker	26	April 22, 1912	Pipeman	9 Kossuth street	Shipping clerk.
W. H. Kuehn	26	March 16, 1913	Pipeman	1805 Ramsay street	Blacksmith.

No. 39 ENGINE COMPANY (FIRE BOAT).—Located Pier 7, foot of President Street.

Organized November 5, 1910.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
James N. Robb	37	May 26, 1898	Captain	2635 N. Calvert street	Pilot.
John A. Roberts	28	Jan. 25, 1912	Lieutenant	139 S. Ellwood avenue	Pilot.
Edward F. Kerr	32	Feb. 8, 1912	Mate	2704 Orleans street	Pilot.
Laurence Broun	42	May 1, 1907	Engineman	525 S. Lakewood avenue	Marine engineer.
James W. Paul	37	July 1, 1909	Asst. Engineman.	522 S. Montford avenue	Marine engineer.
Henry Ulrich	37	Nov. 30, 1907	Asst. Engineman.	504 S. Lakewood avenue	Marine engineer.
Edgar Chaplan	30	Sept. 17, 1910	Asst. Engineman.	521 N. Arlington avenue	Marine engineer.
William Geisel	26	Oct. 29, 1912	Stoker	1628 E. Chase street	Stoker.
William Dell	37	March 16, 1911	Sub. Act'g Stoker.	1825 Gough street	Stoker.
James Donahue	35	April 22, 1912	Sub. Act'g Stoker.	701 S. Dallas street	Stoker.
Raymond Efford	24	Nov. 25, 1913	Sub. Act'g Stoker.	3038 E. Monument street	Marine engineer.
George Carroll	37	Sept. 11, 1910	Pipeman	506 S. Streeper street	Tanner.
Charles Winkler	41	Jan. 20, 1908	Pipeman	2110 Fairmount avenue	Lineman.
William Erbert	37	Aug. 12, 1911	Pipeman	414 S. Patterson Park ave.	Rigger.
George Burnett	37	July 9, 1909	Pipeman	2037 E. Lombard street	Stoker.
Frank Siegrist	26	April 22, 1912	Pipeman	1826 Bank street	Upholsterer.
Charles Davis	27	April 22, 1912	Pipeman	2433 Woodbrook avenue	Oiler.
Fred Strohl	32	July 9, 1909	Pipeman	503 N. Castle street	Butcher.
Boniface J. Metzger	24	Aug. 11, 1912	Pipeman	1909 Bank street	Boxmaker.
Frank Keidel	23	Oct. 22, 1913	Probationer	432 S. Eden street	Barber.

No. 40 ENGINE COMPANY.—Located on corner Garrison and Liberty Heights Avenues.

Organized February 7, 1911.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Charles Stroheker	34	Nov. 19, 1903	Lieutenant	2482 Wilkens avenue	Hair spinner.
Edward T. Baney	35	Jan. 1, 1911	Pipeman	2840 Harlem avenue	Laborer.
James R. Ford	28	Aug. 8, 1910	Pipeman	2807 Harlem avenue	Tinworker.
Walter B. Pitt	32	June 11, 1911	Pipeman	612 Glenolden avenue	Machine operator.
Otto Bosies	26	Aug. 11, 1911	Pipeman	121 S. Calverton road	Hairworker.
Carl E. Bladin	29	Dec. 11, 1911	Pipeman	1322 N. Milton avenue	Machinist.
Charles J. Cain	28	Feb. 21, 1908	Pipeman	2830 Harlem avenue	Ironmolder.
George M. Herold	34	July 19, 1912	Pipeman	123 N. Patterson Park ave.	Shadehanger.
James Radford	48	March 9, 1897	Pipeman	1712 E. Lanvale street	Hostler.
George A. Ford	55	May 6, 1896	Pipeman	1302 N. Gilmor street	Clerk.
Thomas P. Kennedy	42	March 20, 1908	Pipeman	1310 Aisquith street	Clerk.

No. 1 HOOK AND LADDER COMPANY.—Located on Gay Street, near Baltimore Street.
Organized February 15, 1859.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
James V. McCarron	43	March 1, 1895	Captain	2535 E. Monument street	Potter.
Asa Griffith	35	Nov. 17, 1904	Lieutenant	2920 E. Pratt street	Conductor.
Harry A. Donahoo	44	May 29, 1896	Tillerman	136 N. Curley street	Shirt cutter.
Joseph E Haskell	33	July 1, 1903	Asst. Tillerman	1831 N. Bond street	Wood carver.
John Strohminger	42	June 2, 1900	Hostler	232 Port street	Driver.
August C. Hartman	35	March 16, 1908	Asst. Hostler	29 Mine Bank lane	Railroad fireman.
Joseph A. Gallion	28	June 1, 1907	Ladderman	650 W. Lee street	Clerk.
Albert J. Russell	39	Dec. 22, 1909	Ladderman	1533 S. Charles street	Railroad brakeman
John Schmidt	30	Jan. 1, 1909	Ladderman	104 N. Curley street	Driver.
Edward H. War	26	July 19, 1912	Ladderman	1032 N. Collington avenue	Clerk.
Albert T. Cooper	26	April 16, 1910	Ladderman	1107 E. Hoffman street	Carpenter.
John T. Barry	28	Aug. 9, 1911	Ladderman	439 N. Lakewood avenue	Laborer.
Richard J. Dundon	24	Aug. 6, 1913	Probationer	1709 W. Lombard street	Machinist helper.

No. 2 HOOK AND LADDER COMPANY.—Located on Paca Street, near Fayette Street.
Organized April 1, 1859.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
J. Walter Bradley	34	Jan. 3, 1903	Captain	17 S. Calhoun street	Clerk.
Charles L. Steinwedel	45	March 9, 1897	Lieutenant	336 Ashton street	Laborer.
William C. Talbott	33	Feb. 1, 1907	Tillerman	1054 W. Fayette street	Motorman.
William H. Close	29	Feb. 1, 1906	Asst. Tillerman	37 Gorman avenue	Clerk.
Oscar W. Deaver	32	Jan. 1, 1908	Hostler	1402 Harford avenue	Driver.
Howard O. Ely	35	Nov 5, 1910	Asst. Hostler	405 Duncan street	Driver.
Henry J. Carle	43	March 1, 1895	Ladderman	422 N. Poppleton street	Electrotyper.
Frank H. Bauer	29	Sept. 6, 1912	Ladderman	224 S. Collington avenue	Printer.
James A. Cvach	26	April 22, 1912	Ladderman	821 Washington street	Plumber.
John E. Mack	29	July 12, 1905	Ladderman	1336 Fort avenue	Railroad fireman.
Murray L. Byrne	31	June 1, 1913	Ladderman	2031 W. Baltimore street	Shirt cutter.
Louis J. Appel	26	Jan. 27, 1912	Ladderman	223 S. Collington avenue	Cabinetmaker.
Arthur J. Elgert	22	Aug. 11, 1913	Probationer	1916 Eastern avenue	Driver.

No. 3 HOOK AND LADDER COMPANY.—Located on Ann Street, near Gough Street.

Organized January 1, 1871.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
John J. Clancy	46	Oct. 2, 1897	Captain	2948 Harford road	Canmaker.
Peter Nelson	55	Jan. 1, 1890	Lieutenant	1719 N. Wolfe street	Seaman.
James F. Reilly	61	Nov. 13, 1874	Tillerman	1633 E. Lombard street	Painter.
Harry Reed	35	Nov. 16, 1907	Asst. Tillerman	1602 McElderry street	Laborer.
William Hastler	50	April 1, 1893	Hostler	1929 Fleet street	Hostler.
Charles Sommers	46	April 2, 1902	Asst. Hostler	402 S. Wolfe street	Railroader.
Peter J. McMahon	40	Dec. 1, 1900	Ladderman	2105 E. Lombard street	Laborer.
Adam J. Mechlinski	29	June 19, 1907	Ladderman	2500 Foster avenue	Ironworker.
John W. Wittig	42	April 27, 1898	Ladderman	1746 Bank street	Laborer.
James C. McNamara	27	Aug. 8, 1910	Ladderman	303 S. Collington avenue	Hostler.
Thomas J. Kenny	37	Aug. 3, 1912	Ladderman	621 S. Decker avenue	Steward.
Charles Zuschlag	34	Dec. 26, 1912	Ladderman	2233 Lamley street	Driver.

No. 4 HOOK AND LADDER COMPANY.—Located on McCulloh Street, near Preston Street.

Organized December 15, 1880.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Louis Herman	43	Oct. 1, 1897	Captain	1622 N. Washington street.	Machine hand.
Henry Binau	32	Jan. 15, 1905	Lieutenant	2050 E. Federal street	Clothing cutter.
F. W. Stortz	41	Oct. 1, 1902	Tillerman	537 N. Kenwood avenue	Painter.
J. E. Watts	35	Nov. 19, 1903	Asst. Tillerman	2242 W. Fayette street	Bricklayer.
A. J. Connelly	58	April 1, 1882	Hostler	903 N. Payson street	Driver.
G. W. Michael	32	Aug. 6, 1903	Asst. Hostler	2919 Belmont avenue	Driver.
C. E. Wood	34	Jan. 1, 1911	Ladderman	632 Columbia avenue	Motorman.
J. H. Marshall	34	Feb. 4, 1905	Ladderman	517 N. Washington street.	Brass finisher.
Ferdinand Euler	27	Aug. 11, 1911	Ladderman	2025 E. Oliver street	Collector.
T. A. Heagerty	35	July 1, 1907	Ladderman	104 N. Fulton avenue	Seaman.
J. J. Roberts	27	Mar. 19, 1910	Ladderman	239 N. Gilmor street	Machine helper.
J. L. Wies, Jr	22	June 1, 1913	Ladderman	414 E. Preston street	Oiler.

No. 5 HOOK AND LADDER COMPANY.—Located corner Harford Avenue and Oliver Street.

Organized April 6, 1887.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
John R. Miller	43	March 1, 1895	Captain	3713 Roland avenue	Carpenter.
George Hanauer	40	Dec. 15, 1897	Lieutenant	1923 E. Biddle street	Tinner.
Joseph P. McGinn	36	March 15, 1906	Tillerman	1563 Carswell street	Clerk.
John F. Heins	41	Jan. 19, 1905	Asst. Tillerman	1647 Abbotston street	Hardwood finisher.
William Quinn	63	April 1, 1887	Hostler	1034 N. Eden street	Driver.
Bertram W. Stansbury	34	Nov. 16, 1907	Asst. Hostler	1710 Harford avenue	Laborer.
John Sullivan	50	Dec. 8, 1890	Ladderman	1415 Harford avenue	Painter.
Robert E. L. Johns	50	Feb. 7, 1898	Ladderman	1752 E. North avenue	Carpenter.
Andrew L. Frederick	34	April 3, 1902	Ladderman	1805 Hope street	Clerk.
Charles E. Stuart	39	Aug. 1, 1909	Ladderman	1565 Carswell street	Mattress maker.
George C. Foster	35	Feb. 1, 1913	Ladderman	3024 E. Baltimore street	Clerk.
Vacancy			Ladderman		

No. 6 HOOK AND LADDER COMPANY.—Located corner Hanover and Ostend Streets.

Organized April 6, 1888.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Paul Linde	47	Feb. 24, 1891	Captain	502 N. Gilmor street	Canmaker.
Michael J. Farley	51	April 26, 1889	Lieutenant	2328 E. Preston street	Car driver.
Louis E. Erdman	30	Nov. 1, 1906	Tillerman	1134 Harford avenue	Soldier.
Gerlach Debus	31	Oct. 25, 1908	Asst. Tillerman	20 E. Heath street	Cigar-box maker.
William Leonard	60	Feb. 23, 1894	Hostler	1118 Ridgely street	Carpenter.
William C. Becker	40	Nov. 16, 1908	Asst. Hostler	1023 Patapsco street	Carpet layer.
Frank Katzenberger	32	Aug. 8, 1910	Ladderman	1044 William street	Ship carpenter.
Charles Hughes	28	Sept. 11, 1910	Ladderman	1139 Sharp street	Laborer.
Harry A. Dolle	25	Dec. 11, 1911	Ladderman	769 Ramsay street	Rigger.
Albert McGonigle	27	Aug. 16, 1912	Ladderman	436 E. Clement street	Laborer.
Edward J. Hall	33	Feb. 1, 1913	Ladderman	1120 N. Montford avenue	Gardener.
David D. Erdman	23	Feb. 1, 1913	Ladderman	1137 Harford avenue	Meter repairer.
John Vacek	24	Dec. 22, 1913	Probationer	1907 E. Chase street	Chauffeur.

No. 7 HOOK AND LADDER COMPANY.—Located on Greenmount Avenue, near Gorsuch Avenue.

Organized February 3, 1901.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Joseph J. Presley	47	Feb. 15, 1893	Lieutenant	2502 Druid Hill avenue	Car driver
Howard R Waite	38	June 7, 1901	Hostler	624 Malcolm lane	Painter.
John L Thomas	45	June 1, 1892	Ladderman	442 Whitridge avenue	Blacksmith.
Richard S. Watkins	34	Mar. 24, 1907	Ladderman	2932 Independent street	Propertyman.
Frank P. McGarvey	36	Jan. 20, 1908	Ladderman	604 Bartlett avenue	Clerk.
James T. Wheatley	31	Feb. 7, 1911	Ladderman	1641 Harford avenue	Conductor.
Roger W. Hayman	27	Nov. 12, 1910	Ladderman	2331 Greenmount avenue	Blacksmith.
Donald H. Cunningham	26	Feb. 7, 1911	Ladderman	1573 Carswell street	Driver.

No. 8 HOOK AND LADDER COMPANY.—Located on Frederick Road, Carroll.

Organized July 6, 1907.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Amos G. Bramble	46	March 1, 1895	Lieutenant	33 W. North avenue	Driver.
John A. Epp	51	Feb. 15, 1893	Hostler	2563 Frederick road	Cabinetmaker.
Walter F. Musgrove	42	April 8, 1897	Ladderman	3 Cascara street	Ironmolder.
Robert B. McCall	30	Nov. 1, 1906	Ladderman	203 Loudon avenue	Motorman.
Joseph H. Sewell	27	June 1, 1910	Ladderman	1618 W. Baltimore street	Bolt header.
Charles A. Kennedy	30	June 21, 1910	Ladderman	3437 Old Frederick road	Motorman.
Frank M. Schmidt	28	July 19, 1912	Ladderman	105 N. Carrollton avenue	Chauffeur.
James P. Healy	27	Oct. 25, 1912	Ladderman	1928 W. Pratt street	Boilermaker.

No. 9 HOOK AND LADDER COMPANY.—Located corner Roland and Union Avenues.

Organized May 4, 1898.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
George W. Haskell	68	April 22, 1876	Lieutenant	1320 N. Bond street	Carpenter.
George W. Ewig	29	April 16, 1910	Hostler	728 W. Thirty-sixth street.	Wood finisher.
F. C. H. Berger	58	April 3, 1886	Ladderman	2133 N. Fulton avenue	Silversmith.
William H. Cuddy	56	June 29, 1888	Ladderman	1632 N. Aisquith street	Driver.
Henry Weber	28	June 23, 1911	Ladderman	1423 Holbrook street	Tanner.
Frank W. Kuhn	24	Oct. 11, 1912	Ladderman	2126 Mura street	Clerk.
George R. Schleigh	30	Sept. 16, 1913	Ladderman	1602 Aisquith street	Conductor.
Charles K. Childress	27	Mar. 20, 1908	Ladderman	2040 Woodberry avenue	Mariner.

No. 10 HOOK AND LADDER COMPANY.—Located on Lafayette Avenue, near Stricker Street.

Organized March 17, 1895.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
George F. Kennard	46	Sept. 5, 1891	Captain	1810 Rosedale street	Clerk.
Henry C. Kabernagel	53	April 13, 1896	Lieutenant	912 N. Mount street	Rigger.
Frederick Grauling	49	Dec. 26, 1893	Tillerman	2031 E. Fleet street	Oil refiner.
Joseph E. McGuirk	36	Nov. 1, 1906	Asst. Tillerman	1417 Poplar Grove street	Clerk.
Gustavus C. Raabe	55	Sept. 6, 1899	Hostler	1229 N. Gilmor street	Driver.
Thomas Montgomery	72	April 1, 1870	Hostler	121 N. Paca street	Driver.
Harry H. Gay	30	Sept. 1, 1907	Asst. Hostler	53 Garrison lane	Ironmolder.
William S. Fort	45	Feb. 7, 1898	Ladderman	501 N. Monroe street	Painter.
George W. Weber	28	July 1, 1907	Ladderman	1121 N. Monroe street	Blacksmith.
Eugene H. Maihl	43	May 3, 1905	Ladderman	928 N. Fulton avenue	Steamfitter.
John H. Morgenweck	34	April 16, 1908	Ladderman	1715 N. Carey street	Railroad fireman.
Frederick W. Hoffman	32	Feb. 1, 1913	Ladderman	1936 Hollins street	Express messenger.
George H. Austin	30	Mar. 12, 1913	Ladderman	311 E. Lanvale street	Metermaker.

No. 11 HOOK AND LADDER COMPANY.—Located corner North Avenue and McMechen Street.

Organized October 8, 1898.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Thomas J. Strahler....	54	Dec. 10, 1881...	Captain..........	1320 Ensor street	Tinner.
Robert T. Creamer....	46	March 9, 1897...	Lieutenant.......	597 N. Gay street.......	Carpenter.
George E. Fornwalt...	44	Jan. 17, 1897...	Tillerman........	1716 John street..........	Fireman.
Charles C. Whitney...	29	Sept. 26, 1907...	Asst. Tillerman...	2022 McCulloh street......	Butcher.
Charles L. Wain......	45	Dec. 9, 1897...	Hostler	2125 Madison avenue......	Driver.
James E. Doyle.......	44	Mar. 21, 1905...	Asst. Hostler.....	2723 Huntingdon avenue...	Laborer.
Henry Heinze.........	47	Aug. 1, 1898...	Ladderman.......	1937 N. Fulton avenue....	Clerk.
Lawrence Blake.......	66	April 1, 1871...	Ladderman.......	1543 Aisquith street	Painter.
John W. Riggin.......	32	Nov. 13, 1909...	Ladderman.......	720 N. Appleton street...	Mariner.
George W. Reinhardt.	38	Feb. 20, 1899...	Ladderman.......	2418 E. Hoffman street....	Salesman.
Joseph B. Finnerty....	24	Feb. 16, 1912...	Ladderman.	1014 E. Biddle street......	Elevator operator.
John H. Noelker......	28	Mar. 30, 1913...	Ladderman.......	1740 Carswell street.......	Potter.
Arthur E. Chase......	24	Nov. 1, 1913...	Probationer.......	1708 Harford avenue......	Packer.

No. 12 HOOK AND LADDER COMPANY.—Located corner Garrison and Liberty Heights Avenues.

Organized September 17, 1907.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
James K. Merriken....	51	Aug. 1, 1888...	Lieutenant........	3107 W. North avenue....	Driver.
Benjamin F. Seipp....	36	June 22, 1900...	Hostler	1613 W. Laurens street....	Blacksmith.
Charles M. Johannes..	47	Jan. 25, 1895...	Ladderman.......	3013 Westwood avenue....	Stonecutter.
Joseph G. Burger.....	53	March 30, 1897...	Ladderman.......	1722 Warwick avenue.....	Driver.
Henry Meyers.........	32	Oct. 23, 1909...	Ladderman.......	18 Allen avenue.........	Watchman.
Harry L. McCulley....	34	Dec. 27, 1912...	Ladderman.......	1443 Boyle street..........	Boilermaker.
John Lund............	44	Nov. 13, 1905...	Ladderman.......	1804 Gough street.........	Mariner.
Irvin F. Taylor.......	30	April 22, 1913...	Ladderman.......	2431 Druid Hill avenue...	Motorman.

No. 13 HOOK AND LADDER COMPANY.—Located on Carey Street, near Lombard Street.
Organized December 6, 1907.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Charles E. Rice	44	April 15, 1893	Captain	1946 W. Lafayette avenue	Packer.
George U. McFadden	44	May 10, 1892	Lieutenant	3242 Cedar avenue	Carpenter.
John L. Durham	49	May 5, 1889	Tillerman	203 Millington avenue	Plumber.
William T. Hughes	48	Feb. 4, 1898	Asst. Tillerman	1803 N. Fulton avenue	Stonecutter.
Charles Sapp	52	Feb. 14, 1893	Hostler	1418 W. Pratt street	Driver.
John S. Webb	51	Mar. 9, 1899	Asst. Hostler	1210 W. Fayette street	Driver.
James McGee	57	Sept. 27, 1897	Ladderman	1108 W. Lombard street	Driver.
William J. Hunt	33	March 20, 1906	Ladderman	1272 Battery avenue	Clerk.
Charles H. DeFalco	38	March 20, 1906	Ladderman	1438 Boyle street	Laborer.
William Hartwig	46	Nov. 30, 1900	Ladderman	1019 S. Charles street	Tinner.
Walter L. Christopher	38	Aug. 1, 1909	Ladderman	2418 W. Baltimore street	Millworker.
John E. Crandell	30	Aug. 1, 1909	Ladderman	107 S. Gilmor street	Carpenter.

No. 14 HOOK AND LADDER COMPANY.—Located on Gorsuch Avenue, near Harford Road.
Organized September 10, 1906.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Robert H. Dougherty	55	Jan. 12, 1889	Lieutenant	1821 Guilford avenue	Undertaker.
Ambrose Spangler	48	Nov. 26, 1895	Hostler	1706 Gorsuch avenue	Driver.
Martin Kirby	68	April 1, 1883	Ladderman	1724 Gorsuch avenue	Trunkmaker.
John P. Houck	38	Aug. 24, 1905	Ladderman	1567 Carswell street	Tinner.
George F. Liedlich	29	Jan. 1, 1907	Ladderman	2016 E. Lafayette avenue	Baker.
John J. Blessing	39	Jan. 1, 1907	Ladderman	1809 N. Rutland avenue	Mattress maker.
Gustave A. Wetzel	37	Jan. 1, 1911	Ladderman	1504 E. Lafayette avenue	Railroad brakeman.
Joseph F. Lurz	36	Aug. 3, 1912	Ladderman	2008 E. Lanvale street	Warehouseman.

No. 15 HOOK AND LADDER COMPANY.—Located corner Montford Avenue and Mura Street. Organized May 12, 1908.

Name	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Emil Heise	54	March 1, 1890	Captain	724 N. Collington avenue.	Furniture packer.
Frederick N. Duke	47	June 16, 1899	Lieutenant	12 N. Milton avenue	Copper smelter.
Joseph M Diggs	46	May 30, 1896	Tillerman	2231 Gough street	Ironmolder.
James S. Welch	42	Jan. 22, 1901	Asst. Tillerman	1108 McCulloh street	Clerk.
Frank Doerer	48	March 5, 1895	Hostler	2123 E. Preston street	Driver.
William Lohnes	41	Jan. 1, 1907	Asst. Hostler	2006 E. Madison street	Driver.
John W. Killmond	43	June 7, 1907	Ladderman	1514 E. Oliver street	Watchman.
William M. Pierce	38	June 2, 1908	Ladderman	2414 Orleans street	Painter.
Harry Meyers	29	Jan. 20, 1908	Ladderman	822 N. Mountford avenue.	Pipefitter.
Pemberton Warmsley	43	March 7, 1907	Ladderman	616 N. Collington avenue.	Laborer.
Adam G. Reinhardt	28	Aug. 15, 1909	Ladderman	1223 N. Bradford street	Potter.
Victor Probst	25	Sept. 6, 1912	Ladderman	920 N. Luzerne street	Tailor.

No. 16 HOOK AND LADDER COMPANY.—Located corner Calvert and Read Streets. Organized January 1, 1908.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
James P. Lyons	41	March 1, 1895	Captain	412 N. Milton avenue	Horseshoer.
Hugh J. Lavery	32	May 4, 1904	Lieutenant	1042 Valley street	Horseshoer.
Edward B. Beach	35	Jan. 21, 1904	Tillerman	3057 Frederick avenue	Upholsterer.
Joseph H. Potter	29	June 7, 1907	Asst. Tillerman	893 Ramsay street	Boilermaker.
Henry Ruley	27	Dec. 21, 1909	Hostler	1022 N. Bond street	Driver.
John Fairley	27	Feb. 7, 1911	Asst. Hostler	1810 Aliceanna street	Driver.
Albert F. Gambrell	28	Oct. 16, 1909	Ladderman	2405 E. Fayette street	Lineman.
Michael J. Higgins	40	July 1, 1907	Ladderman	102 E. Madison street	Plumber.
Clarence W. Smith	27	Jan. 1, 1911	Ladderman	1308 Greenmount avenue	Conductor.
Albert Eckstein	30	Aug. 12, 1911	Ladderman	127 N. Streeper street	Meat cutter.
George G. Harrer	30	March 28, 1913	Ladderman	223 S. Chester street	Electric line worker.
Albert F. Miller	32	June 6, 1913	Ladderman	926 N. Bradford street	Driver.

No. 17 HOOK AND LADDER COMPANY.—Located corner Linwood Avenue and O'Donnell Street.

Organized January 1, 1908.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Frederick C. Weiss	40	Oct. 1, 1896	Captain	312 S. Wolfe street	Machinist.
Christian H. Fitzberger	44	March 1, 1895	Lieutenant	2909 E. Baltimore street	China packer.
John I. Buck	43	Dec. 12, 1896	Tillerman	1211 N. Eden street	Bricklayer.
George Baumann	27	Aug. 8, 1910	Asst. Tillerman	2225 E. Madison street	Conductor.
Michael L. Waldhauser	40	Jan. 1, 1908	Hostler	903 S. Streeper street	Driver.
Charles H. Fink	28	Mar. 26, 1911	Asst. Hostler	632 S. Curley street	Parquetry floor layer.
John J. Doyle	28	Jan. 1, 1908	Ladderman	432 S. Patterson Pk. ave.	Driver.
William J. Erlbeck	40	Jan. 1, 1908	Ladderman	514 S. Montford avenue	Manager.
Harry Burk	33	Feb. 1, 1906	Ladderman	2419 Eastern avenue	Carpenter.
Harry J. Lassen	30	Aug. 1, 1909	Ladderman	1916 Eastern avenue	Ironmolder.
John L. Doerer	28	July 1, 1909	Ladderman	939 S. Kenwood avenue	Machinist's helper.
Henry Slitzer	40	Sept. 1, 1912	Ladderman	505 S. Linwood avenue	Piano polisher.

No. 18 HOOK AND LADDER COMPANY.—Located corner North and Ellamont Avenues.

Organized December 26, 1912.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
William T. Newell	40	June 7, 1901	Lieutenant	1302 Valley street	Motorman.
William Baxter	39	Feb. 21, 1908	Hostler	1920 N. Payson street	Tinner.
John M. Healy*	34	Nov. 24, 1911	Ladderman	2514 W. Baltimore street	Laborer.
Jacob Guidice	38	Oct. 10, 1904	Ladderman	1633 Grover Place	Driver.
Henry Condon	37	Oct. 25, 1912	Ladderman	1528 Friendsbury street	Driver.
Howard Aull	30	June 21, 1913	Ladderman	722 S. Regester street	Driver.
George Rausch	24	June 1, 1913	Ladderman	503 N. Bruce street	Fireman.
David A. Farr	23	July 16, 1913	Ladderman	1804 W. Franklin street	Conductor.

*Reinstatement.

No. 1 HIGH PRESSURE SERVICE HOSE COMPANY.—Located on Gay Street, bet. Baltimore and Water Streets.

Organized April 22, 1912.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Peter J. Lynch	40	Jan. 25, 1904	Lieutenant	1926 Bank street	Boxmaker.
Eugene B. Coleman	28	Dec. 22, 1909	Pipeman	2230 Fairmount avenue	Car inspector.
John L. Kurz	29	Aug. 7, 1907	Pipeman	530 S. Lakewood avenue	Clerk.
Benjamin Maaser	37	March 20, 1908	Pipeman	317 S. High street	Motorman.
William T. Blum	29	April 16, 1910	Pipeman	1306 Aisquith street	Ornamenter.
John F. Bloberger	29	Feb. 21, 1908	Pipeman	932 N. Central avenue	Laborer.
Anton G. Cvach	26	Jan. 1, 1911	Pipeman	821 N. Washington street	Machinist.
James W. E. Guidice	34	July 1, 1909	Pipeman	1702 Abbotston street	Barber.
Godfrey L. Fisher	28	Dec. 22, 1911	Pipeman	2406 Asland avenue	Chauffeur.
Andrew J. Parr*	34	Jan. 30, 1912	Pipeman	1402 Holbrook street	Driver.
Frank M. Fisher	27	Sept. 11, 1910	Pipeman	134 N. Collington avenue	Pipefitter.
Peter Baummer	27	Sept. 16, 1912	Pipeman	2104 Moyer street	Box packer.
Leo P. Cortese	23	Nov. 1, 1913	Probationer	1406 Orleans street	Marble polisher.

*Reinstated.

No. 2 HIGH PRESSURE SERVICE HOSE COMPANY.—Located on Paca Street, near Fayette Street.

Organized April 22, 1912.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Lewis R. Bell	38	June 30, 1903	Lieutenant	1529 Marshall street	Machinist's helper.
Frederick W. Holdefer	26	Aug. 12, 1911	Pipeman	1519 E. Madison street	Mariner.
Frederick C. Dietz	25	Jan. 1, 1911	Pipeman	908 Woodley street	Candymaker.
Frank Daugherty	29	Aug. 1, 1909	Pipeman	1929 Wilhelm street	Ironworker.
Valentine Englehardt	30	Mar. 15, 1906	Pipeman	1159 Cleveland street	Clerk.
Charles J. Schalter	27	Jan. 1, 1908	Pipeman	2619 Lehman street	Butcher.
Alexander Rinecker	40	July 1, 1909	Pipeman	2531 E. Monument street	Laborer.
Martin J. Reynolds	30	Dec. 27, 1912	Pipeman	423 Colvin street	Car conductor.
William J. Roach	33	Mar. 28, 1913	Pipeman	2621 Woodbrook avenue	Motorman.
Charles F. Rohlfing	26	June 1, 1913	Pipeman	1014 Scott street	Driver.
Lewis A. Bossert	26	Feb. 7, 1911	Pipeman	143 Wilkens street	Butcher.
Leland S. Lynch	27	July 16, 1913	Pipeman	1723 W. Franklin street	Laborer.

No. 1 WATER TOWER COMPANY.—Located on Lombard Street, between Howard and Eutaw Streets.

Organized June 1, 1891.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
John G. Rahe	36	May 4, 1904	Lieutenant	715 Gorsuch avenue	Clerk.
John E. Towner	38	May 1, 1909	Hostler	1127 Carroll street	Bridge builder.
Louis L. Waldhauser	29	Aug. 15, 1909	Pipeman	2013 Frederick avenue	Driver.
George A. Bishop	25	Aug. 15, 1912	Pipeman	1825 Gough street	Potter.

No. 2 WATER TOWER COMPANY.—Located on Gay Street, between Baltimore and Water Streets.

Organized October 2, 1909.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation
Bankard B. Guthrie	40	June 22, 1900	Lieutenant	413 N. Chester street	Plasterer.
Frank H. Heines	37	April 2, 1902	Lieutenant	1028 W. Barre street	Piano polisher.
Andrew Heselbach	43	Feb. 21, 1908	Hostler	603 S. Bradford street	Driver.
George Young	39	Mar. 20, 1908	Pipeman	634 N. Kenwood avenue	Woodworker.
Frank C. Griffin	37	Oct. 23, 1909	Pipeman	807 S. Rose street	Tanner.

HIGH PRESSURE SERVICE PUMPING STATION.—Located on South Street, near Pratt Street.

Organized August 8, 1910.

Name.	Age	Date of Appointment.	Position.	Residence.	Former Occupation.
William F. Fitzgerald.	46	Jan. 16, 1905...	Engineman	1284 Battery avenue.......	Machinist.
Zachariah H. Foote, Jr.	25	Mar 29, 1912...	Asst. Engineman.	33 S. Ellwood avenue...	Engineer.
William Fahey........	39	Jan. 1, 1908...	Asst. Engineman.	508 N. Washington street.	Engineer.
Pierce S. Spangler....	29	July 16, 1913...	Asst. Engineman.	1724 N. Montford avenue..	Machinist.
Henry J. Tomlinson...	34	Oct. 4, 1913...	Asst. Engineman.	524 N. Brice street.......	Machinist.
Charles J. Zinkand....	35	Oct. 11, 1913...	Asst. Engineman.	2533 Fait avenue..........	Marine engineer.
Richard W. Williams.	26	Nov. 16, 1913...	Asst. Engineman.	527 S. Luzerne street.....	Marine engineer.
Alfred Hill............	35	Oct. 29, 1909...	Stoker	626 E. Clement street.....	Stoker.
William Tybuck........	31	Mar. 13, 1913...	Stoker	1111 Streeper street........	Marine engineer.
Frank J. Plichta......	32	Mar. 11, 1913...	Acting Stoker....	1605 Aliceanna street......	Stoker.
Herbert W. Rider.....	34	Feb. 27, 1913...	Acting Stoker....	734 S. Robinson street....	Press feeder.

REPAIR SHOP.—Located corner Market Place and Baltimore Street.

Organized January 15, 1912.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
Elijah J. B. Moore...	50	Mar. 1, 1895...	Blacksmith.......	1306 Valley street.........	Blacksmith.
Charles T. Gallion....	29	July 1, 1909...	Machinist........	1111 S. Scott street.......	Machinist.
B. G. Bauernschmidt..	30	Aug. 8, 1910...	Machinist........	29 N. Potomac street....	Machinist.
Walter L. Batty......	28	July 1, 1909...	Machinist........	1819 Orleans street.........	Machinist.
Samuel Truett.........	48	Nov. 23, 1900...	Painter...........	2015 W. Lexington street..	Painter.
Samuel W. Marker...	63	April 15, 1880...	Woodworker.....	3022 W. North avenue....	Carpenter.
Frederick Kahl........	42	Feb. 1, 1906...	Helper...........	2002 W. Lafayette avenue..	Blacksmith.
Henry H. Kaiss.......	28	May 16, 1908...	Helper...........	1619 N. Wolfe street......	Machinist.
Robert A. Clarke.....	30	Aug. 8, 1910...	Helper...........	30 N. East avenue.......	Painter.

REPORT

OF THE

Superintendent of Fire-Alarm Telegraph

1913

REPORT

Baltimore, January 1, 1914.

To the Honorable Board of Fire Commissioners.

Gentlemen:

Although we have had frequent requests from the Sewerage Commission, Paving Commission and City Engineers' Department to alter the alignment of overhead, and in some cases underground equipment, this Department has maintained the high efficiency of its service during the past year.

Every box alarm has been promptly communicated and the telephone calls with which in many instances the operator has had to use some judgment and patience with excited persons giving notice of fire; these calls also have had such attention that the efficiency of the employes has had further demonstration.

The lines and equipment generally have been kept up to a high standard. The regular tests for conductivity and insulation have enabled us to anticipate line trouble, and our exemption from storms has kept us free of the disasters of preceding years.

The underground service has been extended. The lines on Frederick avenue have been placed in conduits to the city limits, with the exception of a short section at Gwynn's Falls, where a new bridge in course of construction has delayed the placing of conduits.

Preparation was made to change the Fort avenue lines from poles to conduits, but the subway work being delayed, a portion of the cable purchased for this section was used at other places.

Several other important sections have been changed and we will be enabled to take down a number of poles and transfer some to the companies who will be compelled to remain overhead until the Electrical Commission completes the connections necessary to order them into the conduits.

Construction work during the year embraced the removal of 60 poles, 216 poles were reset and 46 new poles used to replace such as were decayed and unsafe.

The 46 poles mentioned were taken from other sections and used from time to time avoiding the expense of purchasing for this work.

Eleven thousand six hundred and twelve feet of two-inch iron pipe was laid for installation of new boxes and lateral extensions to meet city and Chesapeake and Potomac trunk lines.

Nine and a half miles of wire were taken down; five and a half of which was used in connecting Box No. 1925, foot of Second avenue, Canton, and changes on Pennsylvania avenue.

Two hundred and fifty-one cross-arms were renewed, 18 manholes built, 13 hand-boxes placed and five cable boxes installed on poles to provide connections with underground service.

Circuits Nos. 37 and 38, entirely underground, were made by changes in circuits 14, 16 and 18, relieving the latter of some boxes and improving the condition of circuits in neighborhood they are located.

The Chesapeake and Potomac Telephone Company, by permission of the Board of Fire Commissioners, rebuilt the Gorsuch avenue line embracing 46 poles from Harford road west.

Connecting new boxes and extending underground service, 32,880 feet of 2-wire, 4,067 feet 4-wire, 1,050 feet 6-wire, 125 feet 10-wire, 11,750 feet 12-wire, 1,000 feet 13-wire, 500 feet 14-wire cable was laid.

For repairs, 2,030 feet 2-wire, 220 feet 4-wire, 795 feet 6-wire, 25 feet 10-wire, 550 feet 12-wire, 40 feet 13-wire cable was used.

Some changes were made in lighting fixtures at the High Pressure Pumping Station. The arc lights which were unsatisfactory, were removed and open lights with reflectors substituted. Some additional wiring was done in the boiler-room to provide a more efficient illumination.

All changes and repairs in lighting equipment in engine-houses has been done by employes of this Department with slight expense for outside help.

The following fire alarm boxes were installed during the year:

1427—Granby and Albemarle streets.
1428—High and Watson streets.
1826—Fleet and Potomac streets.
1925—Foot of Second avenue, Canton.
2624—Gay and Eager streets.
2724—Monument and Wolfe streets.
2725—Lakewood avenue and Madison streets.
466—Lombard and Stricker streets.
715—Brunswick street and city limits.
7323—Edmondson and Ashburton avenues.
7429—Poplar Grove and Brighton streets.
7528—Ashburton and Presbury streets.
7529—Moreland avenue and Presbury street.
7625—North avenue and Eighth street.
8123—Harford and Exeter Hall avenues.
8525—Falls road and Twenty-eighth street.
853—Callow avenue and Whitelock street.
8629—Mount Royal Terrace and Reservoir street.
88—Elgin avenue and Twelfth street.
8822—Dorchester road and Ayrdale avenue.
8823—Grantly street and Springdale avenue.
8824—Forest Park and Oakfield avenues.
8825—Carsdale and Brookline avenues.
8829—Duvall and Allendale avenues.
10–6—J. S. Young Company, Boston and Elliott streets.
10–9—G. Ober & Sons, Hull street.
10–2–5—Greenwald Packing Company, Claremont Stock Yards.
10–2–3–4—Wise Brothers, Wyoming street.

Three of the ten-pin registers were altered from inking recorders to punching instruments, eliminating the serious objections to the former style of making records and clearing the machinery from the disadvantages caused by the ink spreading over the gearing and interfering with proper operation. A new feature of propelling the paper by the substitution of an electric motor in place of the weights for moving the machinery has proven a valuable improvement to these instruments.

The care of batteries and lamps on motor-driven apparatus, which has been made a part of the work of this Department, has been systematized to the extent that this detail of the apparatus has been kept in perfect condition.

Avoiding detail, this report does not show the amount of work done during the year, but I am pleased to report commendable zeal and efficiency displayed on every occasion.

Very respectfully,

JAMES B. YEAKLE,
Superintendent of Fire Alarm Telegraph.

ROSTER OF TELEGRAPH DEPARTMENT.

Name.	Age.	Date of Appointment.	Position.	Residence.	Former Occupation.
James B. Yeakle	71	June 1, 1902	Superintendent	3708 Forest Park avenue	Gen. Manager American Dist. Tel. Co.
Charles C. Prince	49	Jan. 1, 1894	Telegraph operator	2318 E. Baltimore street	Telegraph operator.
William E. Shuter	43	April 1, 1896	Telegraph operator	Guilford Apartments	Telegraph operator
Harry C. Martin	46	June 1, 1896	Telegraph operator	43 S. Stricker street	Telegraph operator.
William F. Gettrust	39	Sept. 8, 1897	Telegraph operator	2303 W. North avenue	Telegraph operator.
Sidney E. Smith	44	March 11, 1899	Telegraph operator	2324 Guilford avenue	Telegraph operator.
Michael J. Dean	45	March 15, 1902	Telegraph operator	731 E. Forty-first street	Telegraph operator.
Andrew L. Black	40	Aug. 16, 1911	Telephone oper'tor	1318 E. Lafayette avenue	Telephone installer.
John J. Eagen	32	Aug. 16, 1911	Telephone oper'tor	1217 S. Charles street	Clerk.
Jerome V. Pippitone	30	Aug. 16, 1911	Telephone oper'tor	2363 McCulloh street	Bookkeeper.
Richard F. Curtis	24	Aug. 16, 1911	Telephone oper'tor	1219 W. Fayette street	Bookkeeper.
James N. Smith	52	Feb. 28, 1897	Lineman	1511 N. Bond street	Lineman.
Thomas W. Glass	49	May 15, 1893	Assistant lineman.	1819 N. Bond street	Lineman.
Nicholas C. Wolfe	61	Aug. 4, 1898	Assistant lineman.	1401 McCulloh street	Lineman.
Joseph F. Borgmeier	46	Jan. 1, 1908	Assistant lineman.	1607 E. Lafayette avenue	Lineman.
Louis B. Bryant	40	Sept. 1, 1911	Assistant lineman	613 E. Thirty-eighth street.	Lineman.
Frank L. Freeze	35	March 5, 1903	Batteryman	1526 John street	Telephone operator.

Department of Public Improvements—Sub-Department Harbor Board

ANNUAL REPORT

OF THE

HARBOR BOARD

TO THE

MAYOR AND CITY COUNCIL OF BALTIMORE

FOR THE

FISCAL YEAR ENDED DECEMBER 31, 1913

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER

1914

DEPARTMENT OF PUBLIC IMPROVEMENTS

SUB-DEPARTMENT HARBOR BOARD

BALTIMORE, MARYLAND

JANUARY, NINETEEN HUNDRED AND FOURTEEN

OSCAR F. LACKEY, HARBOR ENGINEER, *President.*

WILLIAM D. SANNER, *Secretary.*

JAMES S. ARMIGER.

WILLIAM G. KNAPP.

MARCELLUS H. GOODRICH.

JAMES H. IRVIN, *Clerk.*

REPORT

OFFICE OF THE

HARBOR BOARD OF BALTIMORE.

BALTIMORE, January, 1914.

To the Honorable, the Mayor and City Council of Baltimore,

GENTLEMEN—The Harbor Board has the honor to submit the following report of operations of this Sub-Department for the year 1913.

The several sub-divisions of public work in charge of the Board are as follows:

1. Harbor maintenance and improvement, including the maintenance and operation of the Tug "Baltimore."

2. Iceboats, their maintenance, repair and operation when required.

3. Wharves and bridges, including the construction and repair of all city wharves, bulkheads, etc., the general supervision of all wharves and bulkheads, with a view to the enforcement of laws regulating the construction and condition of piers and bulkheads; the granting of permits to construct, extend or alter piers or bulkheads, and the repair and maintenance of all city bridges over navigable waters.

4. The supervision of "anchorages," and the enforcement of all laws and regulations relating to the anchoring of vessels in the harbor.

5. The removal of unsanitary floating matter from the harbor and docks.

6. The reception and disposal of ashes from towboats.

7. As occasion may arise, the removal of vessels sunken in the harbor.

8. The construction of the new system of piers and docks, as authorized by Ordinance No. 149, November 10, 1904, and Chapter 485 of the Acts of 1910 of the General Assembly of Maryland.

Appropriations, etc., for the year 1913 were as follows:

Salaries (engineer and clerk)	$6,130 00
Dredging harbor	55,277 00
Iceboats	23,430 00
Repairs of wharves	7,300 00
Removal of floating matter	1,935 00
Removal of ashes	1,100 00
Incidentals	500 00
Light Street Bridge	16,619 00
Public wharves and docks	19,068 00
New Improvements—	
Commercial Pier, East Baltimore	150,000 00
Total Departmental Appropriation	$281,359 00

DREDGING.

Bids for the annual dredging of the harbor were opened and the contract awarded on February 14, 1913, to the Maryland Dredging and Contracting Company, the lowest bidder, at the following prices:

Back basin and docks	18½ cts. per cu. yd.
Middle branch docks and channels	18½ cts. per cu. yd.
Ship channels and harbor	15 cts. per cu. yd.

In view of the open winter, there being little or no ice, there was no interruption to the work, in consequence of which all dredging was completed on July 7.

The work of dredging was started as early as possible, in order to have it completed before the summer months, hoping that in so doing, the conditions of the harbor might be improved and the odor from the gases eliminated. The conditions were better during the summer of 1913 than at any other time, due, perhaps, partly to the dredging, but more particularly to the fact that a great quantity of the sewerage formerly emptying into the harbor was taken care of by the new sewerage system.

The most important and greatest quantity of dredging done by private interests was the digging of the channel from the main channel of Spring Gardens to the wharf of the Westport Paving Brick Company; the amount of material removed in this case was 143,000 cubic yards.

The main channel was widened 90 feet from below Elevator "C" to a point east of the North German Lloyd Steamship Pier, 17,856 cubic yards being removed.

A 24-foot channel 90 feet wide was dredged from the main channel into the mouth of Skinner's Dry Dock, 11,896 cubic yards being removed. Also a 20-foot channel was dredged from Atlantic Wharf to Young's Wharf, this channel also being 90 feet wide.

The dredging for the Recreation Pier was completed, 77,701 cubic yards being removed.

Table No. 1 shows the locations dredged, amount dredged, area covered, and the cost of same.

TABLE No. 1.

DREDGING LOCATION.	Depth in Feet.	Width in Feet.	Area in Sq. Ft.	Quantity in Cu. Yds.	Rate.	Amount.
Back Basin and Docks.						
Foot of Webster street	18	50	6,000	999	.18½	$184.81
Foot of Williams street	H.B.	50	5,000	744	.18½	137.64
Foot of Calvert street	H.B.	50	6,000	240	.18½	44.40
Foot of Cross street	H.B.	80	10,400	2,681	.18½	495.99
Foot of Washington street	H.B.	30	1,800	1,038	.18½	192.03
Foot of Lancaster street	H.B.	45	2,250	446	.18½	82.51
Foot of Thames street	H.B.	50	6,000	856	.18½	158.36
Foot of Chester street	H.B.	50	7,500	978	.18½	180.93
Foot of Canton street	H.B.	50	4,500	570	.18½	105.45
Between Piers 1 and 2, Light Street Wharf	H.B.	135	20,250	620	.18½	114.70
Between Piers 2 and 3, Light Street Wharf	H.B.	90	11,250	820	.18½	151.70
Pier 4, Light Street Wharf	H.B.	40	3,200	200	.18½	37.00
Pier 5, Light Street Wharf	H.B.	50	5,000	266	.18½	49.21
Pier 7½, Light Street Wharf	H.B.	50	4,000	100	.18½	18.50
Pier 9, Light Street Wharf	H.B.	50	4,500	250	.18½	46.25
Old Bay Line, Light Street Wharf	H.B.	90	10,800	688	.18½	127.28
Chesapeake Line, Light Street Wharf	H.B.	90	9,900	1,200	.18½	222 00
Basin, Light street	H.B.	530	117,600	12,896	.18½	2,385.76
Between Piers 1 and 2, Pratt street	H.B.	130	19,500	1,200	.18½	222.00
Between Piers 4 and 5, Pratt street	H.B.	90	9,000	1,290	.18½	238.65
Between Piers 5 and 6, Pratt street	H.B.	140	42,000	1,365	.18½	252.52
Grebb's Dock	H.B.	50	2,000	230	.18½	42.55
North side Platt's Dock	H.B.	50	3,750	790	.18½	146.15
Woodall's Dock	H.B.	50	4,000	826	.18½	152.81
Back Basin	H.B.	180	72,600	5,472	.18½	1,012.32
North dock, Centre Pier	H.B.	70	59,000	4,234	.18½	783.29
South dock, Centre Pier	H.B.	70	56,000	3,025	.18½	559.63
In front of Renneburg's Pier	16	75	15,000	3,304	.18½	611.24

Alongside of Renneburg's Pier	16	25	2,500	1,024	.18½	189.44
In Skinner's Dock	24	70	8,400	3,142	.18½	581.27
North side of Schall's Dock	18	25	2,500	856	.18½	158.36
Jones Falls	H.B.	100	90,000	72,539	.18½	13,419.71
Inside of Harris' Creek	20	50	6,000	4,416	.18½	816.96
Total	......	......	628,200	129,305	......	$23,921.42
Middle Branch Docks and Channels.						
Foot of Howard street	15	50	5,000	3,641	.18½	$673.59
Foot of Eutaw street	15	50	6,500	1,248	.18½	230.88
Foot of Fort avenue	15	50	6,000	1,842	.18½	340.77
Chatsworth Run	15	50	9,000	4,003	.18½	740.56
Bush Street Channel	20	80	96,000	12,472	.18½	2,307.32
Bush Street Dock	20	80	93,500	22,073	.18½	4,083.50
In front of garbage dump	20	45	6,750	1,410	.18½	260.85
In front of Evans' Wharf	20	45	4,500	1,763	.18½	326.15
In front of Helwig's Wharf	15	45	4,050	360	.18½	66.60
In front of Consolidated Gas Company's Wharf	20	90	10,800	1,567	.18½	289.89
Total	......	......	242,100	50,379	......	$9,320.11
Ship Channels and Harbor.						
Atlantic Wharf to Young's Wharf	20	90	45,000	4,800	.15	$720.00
Channel into Skinner's	24	90	54,000	11,896	.15	1,784 40
Outside of Harris' Creek	20	150	30,000	7,322	.15	1,098.30
Main channel, south side harbor, off B. & O. piers	30	90	72,000	17,856	.15	2,678.40
Total	......	......	201,000	41,874	......	$6,281.10
Back Basin and Docks	......	......	628,200	129,305	......	23,921.42
Middle Branch Docks and Channels	......	......	242,100	50,379	......	9,320.11
Grand Total	......	......	1,071,300	221,558	......	$39,522.63

NOTE—H. B. denotes hard bottom.

The following dredging was done by private parties under permits granted by the Harbor Board:

	Cu. Yds.
Canton Company (Atlantic Wharf)	7,500
Canton Company, Warehouse No. 1, Ship Channel	50,000
Canton Company (new pier)	45,000
Western Maryland R. R. (Port Covington)	15,700
N. C. R. R. (Canton Pier)	22,000
Westport Paving Brick Company (Spring Gardens)	143,000
Terminal Warehouse Company, York street	1,195
Arundel Sand and Gravel Company, Fell street	1,850
N. C. R. R. (Canton)	12,691
U. S. Asphalt and Refining Company (Curtis Bay)	7,883
Ed. Renneberg & Son (Canton)	2,457
Wm. L. Miller, foot of Broadway	1,000
Maryland Trans. Co. (Back River)	4,000
McLean Contracting Co. (Spring Gardens)	21,879
Rasin Monumental Co. (Curtis Bay)	4,522
Baltimore Dry Material Company	5,008
J. S. Beacham & Brother, Marine Railway	500
Maryland Steel Company (Sparrows Point)	15,063
Total	361,248

No dredging was done by the United States Government in the Patapsco River and tributaries for the year 1913.

RECAPITULATION.

	Cu. Yds.
Harbor Board	299,259
Private Parties	361,248
Total	660,507

It can be seen from the recapitulation that there was virtually 1,000,000 cubic yards less material removed in the season of 1913 than in the season of 1912.

MARINE HOSPITAL BULKHEAD.

Little change has taken place in conditions at the Old Hospital site. The Furst Concrete Scow Construction Company was absorbed by the Arundel Sand and Gravel Company and they have added to their waterfront improvements by the construction of an additional bulkhead and pier.

The Ellicott Machine Company have bought some adjoining property and they have enlarged their plant considerably.

Both of these companies are actively engaged in their respective work. The other property, to date, has not been further developed.

The Harbor Board would again renew its recommendation that the remainder of the property owned and controlled by the city be bulkheaded and the land reclaimed.

ICEBOATS.

Whereas, the ice season of 1911 and 1912 was one of the most severe ever experienced, the season of 1912 and 1913 was the absolute reverse, as there was no call for either vessel during the season.

Both vessels were thoroughly overhauled and in compliance with the requirements of the local inspectors new tubes were placed in the main and donkey boilers of the Iceboat "Annapolis." The machinery of both vessels was overhauled, as well as the wheels, etc.

Both vessels were hauled, bottoms scraped and painted with two coats of approved paint.

The Iceboat "Latrobe" was used as an excursion boat for the Free Summer Excursions, as well as for other excursions as provided for by ordinance of the Mayor and City Council of Baltimore.

CONDENSED LOG OF ICEBOAT "LATROBE"—1913.

May 1—Excursion to Annapolis (Ladies' Recreation Centre).
May 11—Excursion to W. M. R. R. Piers, around Ft. Carroll.
May 17—Excursion to Seven-Foot Knoll.
May 21—Excursion to North Point.
May 22—Excursion to Annapolis.
May 31—Excursion to Sandy Point (Female High School Teachers).
June 10—Excursion to Baltimore Light House.
June 12—Free summer excursion.
June 19—Free summer excursion.
June 25—Excursion to Annapolis (Teachers' Association).
June 26—Free summer excursion.
July 8—Excursion to Annapolis.
July 10—Free summer excursion.
July 17—Free summer excursion.
July 24—Free summer excursion.
July 31—Free summer excursion.
August 2—Excursion to Sandy Point (Order of Eagles).
August 7—Free summer excursion.
August 11—Free summer excursion.
August 21—Free summer excursion.
August 28—Free summer excursion.
August 29—Excursion to Seven-Foot Knoll (Negro Knights of Pythias).
September 1—Excursion to Baltimore Light House.
September 4—Free summer excursion.
September 17—Excursion to Town Point, Elk River (Inland Water Ways Commission).
September 21—Excursion to Fort Carroll.

TUG "BALTIMORE."

Where the iceboats were not in demand during the season of 1912 and 1913, such was not the case with the Tug "Baltimore"; she was kept busy opening up the channels of the tributaries and rendered excellent assistance to the shipping interests. The old plow, having been destroyed in the severe season of 1911 and 1912, was replaced with a heavier one and the vessel generally overhauled, including additional ribs and heavy steel plates forward. The boilers and engines were also overhauled and the necessary repairs made.

CONDENSED LOG OF THE TUG "BALTIMORE" FOR 1913.

TRIPS FROM BERTH AND RETURN.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Anchorage	6	11	9	5	9	13	15	18	15	13	20	29	163
Back Basin		1		1			1	1	2				6
Bollman's Wharf		1		1			1						3
Booze's Marine Railway				5			2						7
Chesterwood					2				1				3
City Pier	9	8	10	13	17	15	11	16	13	7	5	10	134
Coal Dock	2	3	2	2	2	2	2	1	2	1	1	2	22
Codd's Marine Railway				1			1	1					3
Curtis Bay				1	1	5		1	1		1	4	14
Down the Bay		1	2		2	2	1	5	2	2			17
Ft. Armistead			2										2
Ft. Carroll			2										2
Ft. McHenry								2	1		1		4
Hackett's Point		1											1
Harris' Creek		1		2	2		1		1				7
Light Street Bridge	3	4	4	5	2	4	5	4	5	3	5	2	46
Love Point		1											1
Magothy River					1	1	1			1			4
Middle Branch			1		1	4	3	2	5	2			18
Miller's Island						2	2						4
Montford Avenue		2					4						6
New Quarantine		1	5	1				1	1				9
North Point				1	1						1		3
Old Marine Hospital	4	4	3	2	3	11	8	5	9	5	6	10	70
Pier 4, Pratt street	6	22	19	14	13	28	18	22	22	11	1	7	183
Pier 5, Pratt street	2	1				1							4
Pier 6, Pratt street		2	3	2									7
Pier 7, Pratt street	4	8	8	10	11	7	5	4	8	1	3	3	72
Piers P. R. R. Canton			1				1						2
Poole's Island						1	1						2
Queenstown										1			1
Recreation Pier	4	5	3	7	10	11	8	7	11	3	5	3	77
Rock Creek	1			1	1	1	2	1				1	8
Sassafras River						1							1
Skinner's Drydock			1	1	1		1						4
Southside	3	5	4	2	2	2	3	1	1				23
Spedden's Shipyard					3		2	1		1			7
Spring Gardens	1	1	2	1		1	6	6			3	2	23
Steelton					1		1						2
Stony Creek	1	1		1	1	1	8					1	14
Wagner's Point			1	1		1							3
Woodall's Dry Dock	1				1								2

TIED UP FOR REPAIRS:

January	17	May	2	September	3
February	4	June	2	October	11
March	6	July	6	November	1
April	8	August	3	December	0

ANCHORAGE BUOYS.

All buoys broken were repaired and new buoys placed where needed. Those buoys that had shifted were restored to their proper location.

REPAIRS TO WHARVES.

The repairs to wharves can best be seen from the report of the Supervisor of Wharves, as follows:

REPORT OF SUPERVISOR OF WHARVES.

BALTIMORE, January 1, 1914.

MR. O. F. LACKEY, *Harbor Engineer.*

DEAR SIR— I respectfully submit my report for the year 1913:

Placed new fender logs in Back Basin.

Placed new covers on gutter drains on Pratt street bulkhead.

Placed new flooring on driveway in center of Pier No. 8, also cut off the heads of all decayed piles and painted the heads of piles with a tar covering; also made general repairs to the pier.

Repaired flooring where necessary and other repairs to Pier No. 7.

Filled sunken place on Lancaster street bulkhead.

Made repairs from time to time on small pier foot of Calvert street.

Superintended the raising of the grade on both sides of the driveway at Centre Pier so as to conform with the paving done by the City Engineer's Department.

Also the repairs and bracing of the dump platform of the Street Cleaning Department at Back Basin.

Building and repairing boats for the Scavenger's Department.

Pulled and redrove old clusters of piles on the west side of Pier 4.

Repairs and joiner work on the iceboats "Latrobe" and "Annapolis."

Repairs and joiner work on Tug "Baltimore." Took off plow and repaired same on tug.

Repairs to fender and waling pieces on Pier 4.

Painted buoys.

Placed new guard log on Lancaster street bulkhead.

Placed sectional signs on Piers 5 and 6.

The following permits were granted by the Harbor Board during the year:

No. 675—Benj. Glenn, extension, Piers Nos. 18 and 19 Light street.
No. 678—McLean Contracting Company, bulkhead, Thompson Chemical Company.
No. 683—Sewerage Commission, foot of William street.
No. 686—Sanford & Brooks, extension, Speddens' Pier.
No. 687—Sewerage Commission, foot of Exeter street.
No. 94—Schall Packing Company, extension.
No. 698—Canton Company, foot of Gwinn street.
No. 699—J. R. Byrd, shed, foot of Fells street.
No. 700—Globe Wrecking Company, paved head of Pier 5 Pratt street.
No. 701—B. C. & A. Railway Company, extension, Piers 6 and 7 Light street.
No. 705—Chesapeake Contracting Company, extension, Westport Brick Company.
No. 711—Canton Company, extension, foot of Chester street.
No. 714—McLean Company, extension, Skinners' Ship Building Company.
No. 715—Benj. Glenn, bearing piles, Elevator No. 3.
No. 716—Benj. Glenn, rebuilt, Platt's Wharf.
No. 717—Western Md. R. R., Port Covington.
No. 723—Sewerage Commission, foot of Caroline street.
No. 724—Sanford & Brooks Co., bulkhead and ties, foot of Patuxent street, Tin Decorating Company.
No. 726—Chas. L. Rohde, wharf, Clinton street.
No. 732—Canton Company, shed, Aliceanna street.
No. 739—Ober's Wharf, fenders and flooring.

No. 744—McIntyre-Henderson's Wharf.
No. 745—Aug. Wienhold, piers, Spring Gardens
No. 746—Southern Dryer Company, pier, Curtis Creek.
No. 748—Pennsylvania R. R., head, foot of Bond street.
No. 751—McLean Company, extension, Pier 3 Spring Gardens.
No. 754—Benj. Glenn, repairs, piers, Wagner Point.
No. 756—B. C. & A., extension, Piers 3 to 7½ Light street.
No. 779—Crook-Kries Company, pipe through bulkhead.
No. 781—Andrew Miller, bulkhead seawall.
No. 784—Johns Hopkins Estate, repairs, Clinton street.
No. 790—Benj. Glenn, fenders, piles, Pier 1 Pratt street.
No. 791—Andrew Miller, bulkhead, Colgate Creek.
No. 792—Mann Yacht Building Company, extension, Ferry Bar.
No. 795—Nilson Yacht Building Company, extension, Ferry Bar.
No. 800—Benj. Glenn, bulkhead, Wagners Point.
No. 801—Chesapeake Contracting Company, dam, foot of Bayard street.
No. 802—McLean Contracting Company, extension, Pier 5 B. & O.
No. 805—Arundel Sand & Gravel Company, bulkhead, Fairfield.
No. 806—Canton Company, piers, Canton.
No. 808—McLean Contracting Company, bulkhead, foot of Haubert street, Spring Gardens.
No. 809—J. S. Young, fenders, piles, foot of Chesapeake street.
No. 814—Canton Company, pier, foot of Leakin street.
No. 815—Baltimore Pulverizing Company, shell conveyors, Clinton street.
No. 818—Benj. Glenn, repairs trestle, Gas Company, Bear Creek.

I also made a general inspection of all wharf property, including Light Street Bridge, and superintended repairs from time to time. I also made a thorough examination of all wharf property for which permits were granted by the Board, with a view of seeing that the work on same was properly carried out in accordance with the provisions of said permit.

I also made a daily inspection of all packing-houses during the season to see that they placed the calcium hypochlorite around their drains and property as was ordered by the Harbor Engineer.

Respectfully submitted,

William A. McDonough,
Supervisor of Wharves.

Canneries Inspections.

During the canning season daily inspections were made of the different canneries to see that proper precautions were taken to prevent the pollution of the harbor from the offals of these factories, and no doubt the fair condition of the harbor was somewhat brought about by the precautions taken and the treatment given.

Light Street Bridge.

As so much has been said in reference to Light Street Bridge, there is very little to add, unless it be to state that the conditions of the Light Street Bridge are not improving, but are getting worse year by year. This Department is using every possible method to keep the cost of maintenance at as low a figure as the safety will permit, in the hope and expectation that it will be but a short time before the present bridge is done away with and a new bridge constructed.

The following repairs were made:

1500 linear feet of new top and bottom flooring.
48 12x12 inch caps renewed.
75 10x10 inch caps renewed.
273 posts of frame bents renewed.
321 cleats replaced.
852 linear feet of footway renewed, including 146 new joists.
448 linear feet of fender on footway renewed.
605 linear feet of hand rail renewed.
404 linear feet of fender on roadway renewed.
18 posts of hand rail renewed.
440 linear feet of 8x10 inch fender on draw renewed.
2 10x14 inch caps on draw renewed.
592 linear feet of fender on south side of draw span renewed.
2 new gear wheels placed in engine.
Engines and boilers generally overhauled.

The following tables will show the traffic over and through the bridge:

LIGHT STREET BRIDGE TRAFFIC.

	Material.	No.	Tons.
DISTRIBUTION OF LOADED SCOWS PASSING THROUGH DRAW.	Coal	421	89,207
	Brick	75	2,145
	Fertilizer	275	23,985
	Garbage	105	6,770
	Marble	21	1,950
	Sand	50	11,700
	Plaster	10	2,500
	Mud	247	126,000
	Old Iron	4	550
	Empties	1,448	....

	Material.	No.	Tons.
DISTRIBUTION OF LOADED BARGES PASSING THROUGH DRAW.	Coal	41	32,800
	Lumber	68	20,550
	Marble	13	560
	Oil	46	27,000
	Empties	199	....

	Material.	No.	Tons.
DISTRIBUTION OF LOADED SCHOONERS PASSING THROUGH DRAW.	Lumber	176	17,015
	Wood	32	2 192
	Brick	10	81,900
	Manure	11	800
	Oil	1	2,100
	Empties	221	....

	Class.	No.
DISTRIBUTION OF EMPTIES PASSING THROUGH DRAW.	Scows	1,448
	Barges	199
	Schooners	221
	Steamers	1,346
	Tugs	6,045
	Rafts	10

TRAVEL OVER BRIDGE.

Single teams	107,228
Double teams	113,620
Street cars	159,007
Funerals	478

Draw was opened 7,391 times.

REMOVAL OF ASHES.

As provided for by law, there is anchored off Anchorage No. 1 a scow, upon which are deposited ashes of the tugboats plying in the harbor, to prevent the same from being thrown in the ship channels.

All of these ashes were deposited behind private bulkheads, free of cost to the city. The condition of the present scow was such that to repair it would cost perhaps equally as much as a new scow, in consequence of which the Department requested of the Board of Estimates an appropriation sufficient to cover the cost of a new scow, and the same will be placed in commission as soon as completed.

REMOVAL OF FLOATING MATTER.

For the purpose of keeping the harbor free of floating matter, there are, during the months of June, July, August and September, one superintendent and six boatmen appointed by the Department, and the material removed may be seen from the table below:

REMOVAL OF FLOATING MATTER.

FLOATING MATTER.	Boat No. 1.	Boat No. 2.	Boat No. 3.	Boat No. 4.	Total.
Cats	60	70	70	58	258
Dogs	71	63	72	51	257
Rats	129	126	139	87	481
Fish	44	50	54	30	178
Meat (lbs.)	111	114	603	93	921
Garbage (loads)	74	79	90	55	298
Logs	59	85	106	58	308
Watermelon rinds (loads)	43	20	.....	17	80

OFFICE WORK—SURVEYS, ETC.

Pratt Street Bridge—This Department furnished engineering supervision and inspection for the construction of this bridge, which was completed April 5, 1913. In addition, data was compiled, pertaining to the time consumed by the Contractor (D. V. Ault & Co.) in the various stages of construction, and several drawings were made in connection with the above work.

Recreation Pier—Construction work was started on January 1, 1913. Base line and other surveys were made and thirty drawings in connection with the construction work were prepared. Engineering supervision and inspection were furnished by the Department. The inspection of this work, particularly that of the concrete piles, was very carefully made and insured high-grade construction. The construction of the sub-structure of the pier and the grading and paving of the adjacent streets, which comprises the entire work let out under contract by the Harbor Board, was completed December 31, 1913. A survey of the property at the southwest corner of Thames street and Broadway was made and a condemnation plat prepared with the idea of the city acquiring this property to widen the street at this point.

Key Highway—The Department furnished inspection for the removal of buildings and the filling up of old cellars and holes on the line of the first section of this highway. Drawings showing the present and proposed grades for the second section of Key Highway and proposed change of United Railway tracks on Light street (first section of Key Highway) were prepared and sent to the City Engineer's Department.

All plans and specifications for the paving of the Key Highway were prepared by this Department and sent to the City Solicitor for his approval and by him referred to the City Engineer's Department, as the work of construction, by authority of the Board of Estimates, was turned over to that Department.

SURVEYS.

Topographic survey of territory from foot of Hanover street to Ferry Bar.

Topographic survey of north shore line of Middle Branch of Patapsco River, from Fort McHenry to Ferry Bar.

Hydrographic resurvey of portion of Middle Branch of Patapsco River, covering the area from Light Street Bridge to a line 3,800 feet east of same.

Hydrographic survey of channel leading into Westport Paving Brick Company in Spring Gardens.

Hydrographic survey of Curtis Creek, from County Bridge to mouth of Curtis Bay, with the exception of a strip of 500 feet wide, between Stone House Cove and Wagner's Point.

Survey of the location of the sunken Steamship "Alum Chine," blown up by dynamite at anchorage off Quarantine grounds.

Survey of various new industrial improvements along Patapsco River and tributaries, for the purpose of keeping map of Patapsco River up to date.

Several miscellaneous surveys in connection with various proposed improvements around the harbor.

PLANS, ESTIMATES AND DESIGNS.

Map of upper harbor, showing municipal piers.

Plat showing proposed changes in pierhead line in Patapsco River, between Lazaretto Light House and Point Breeze.

Plat showing proposed changes in pierhead line in Southwest Branch of Patapsco River.

Plat of Baltimore Harbor, showing proposed waterfront improvements (for book of laws relating to Baltimore Harbor).

Compiled information in regard to distances and areas in Baltimore Harbor and Chesapeake Bay (for book of laws relating to Baltimore Harbor).

Investigations in regard to proposed waterfront improvements for Baltimore Harbor in Southwest Branch and Main Branch, Patapsco River.

Plotted soundings in Patapsco River, from Lazaretto to Fort Carroll, Middle Branch and Curtis Bay.

Map showing location of sunken Steamship "Alum Chine," blown up by dynamite off Quarantine grounds.

Plotted buoys in Curtis Bay and Fort McHenry channels.

Investigations, estimates and maps in connection with the proposed 600 feet wide 35-foot channel in Southwest Branch, Patapsco River, from Fort McHenry to Light Street Bridge.

Complete record of tides for the year.

Compiled previous tide records for determination of maximum and minimum tides.

Plans and estimates for repairs to municipal garbage platform on Centre Pier, Back Basin.

Plans and estimates for repairs to municipal garbage platform, near the foot of Bayard street, Spring Gardens.

Preliminary estimate of cost of new city pier, foot of Calvert street.

Plans of Patapsco River, from Spring Gardens to Fort Carroll, scale 1″=1,000′.

Data relating to the amount of lumber stored during the year upon the municipal wharves and docks.

Map of Patapsco River, from Fort McHenry to Sparrows Point, scale 1″=500′, is in final stages of completion.

Work has been started on a map of the Patapsco River and tributaries, from Sparrows Point to the mouth of the river.

In addition to the above, data relating to the harbor and the tides has been furnished to various corporations and individuals.

Twenty-five miscellaneous drawings have also been prepared.

RECORD OF TIDES.

REFERENCE PLANE—M. L. T. HARBOR BOARD DATUM.

YEAR.	HIGH TIDES.		LOW TIDES.		MAXIMUM TIDE.			
	Number Observed.	Mean.	Number Observed.	Mean.	High.	Occurred.	Low.	Occurred.
1911..........	685	+1.04	685	0.00	+2.7	Sept. 20 Oct. 2 Oct. 4	—3.0	Mar. 23
1912..........	639	+1.06	633	—0.04	+2.7	Mar. 29 Sept. 18 Sept. 23	—2.7	Feb. 4
1913..........	666	+1.09	670	0.00	+3.9	Oct. 20	—3.1	Dec. 9
1911 to 1914..	1,990	+1.06	1,988	—0.01	....	....	....	....

Maximum Range of Tide, 1911........................	5.7
Maximum Range of Tide, 1912........................	5.4
Maximum Range of Tide, 1913........................	7.0

NEW WORK.

Key Highway—Plans showing the location of the second section of the Key Highway, from Montgomery street to the west side of Lawrence street, were approved by the Harbor Board and submitted to the Board of Estimates. Under authority of the Board of Estimates, this plan was submitted to the Commissioners for Opening Streets, plat prepared and the property is now being purchased by the Commissioners for Opening Streets. All profiles, etc., in connection with the construction work have been prepared by this Department and submitted to the City Engineer, as by authority of the Board of Estimates, this construction work has been turned over to that Department.

Plans were also prepared by this Department locating the third section of the Key Highway, including an extension bordering on the Middle Branch of the Patapsco River, from Fort McHenry to Ferry Bar. It is the opinion of the Harbor Board that if this street is to be constructed, that the city acquire all riparian rights bordering on the proposed street, or where there are no existing piers, etc., and that the same be held by the city and improved when there are demands that would justify the necessary expenditure of money for the construction of piers.

This Department has prepared an elaborate study for the development of Spring Gardens, from the foot of Howard street to Ferry Bar, which is more fully described in the annual report of the Harbor Engineer to the members of the Harbor Board.

Commercial and Recreation Pier—The contract for the construction of the substructure was awarded to William L. Miller and Luke D. Mullen, of Boston, on December 12, 1912, they being the lowest bidder, at an estimated cost of $210,000. The work was completed the latter part of December, 1913, at a cost less the paving on pier of $192,244.37.

The substructure is entirely of reinforced concrete and steel, and the pier was designed, as its name would imply, the lower deck for commercial purposes and the upper deck for recreation.

As the harbor widens out at this point, the pier was designed to allow a depth of water in docks of 35 feet when needed. At this time the depth is 27 feet, being ample for those vessels which will use it at the present time.

The docks are 190 feet wide with bulkheads on either side. While provision has been made for a depth of water of 35 feet, or a depth in itself sufficient to take care of transatlantic liners, the pier was not designed for that specific purpose, but it was deemed advisable to have at command a pier which could be turned over, were there any demand for space by the larger type vessels.

The total length of waterfront at the disposal of the city was 530 feet and a dock of 190 feet should provide an ample width, as it is hardly possible that any large vessels will berth along the bulkheads. The purpose of the bulkheads is to turn them over to the use of lighters, transferring cargoes from the opposite side of the harbor, for local distribution. In consequence of which there will be no two vessels abreast of each other in the slips.

The pier is 150 feet wide by 500 feet, and for one-half its length is a solid type similar to Piers 4, 5 and 6.

The driveway for the depth of buildings is 35 feet, widening out to 58 feet in width and paved with sheet asphalt. The outer half is paved for its full width. Later, after the fill has settled behind sheet piling, the balance of the pier will be paved.

The bulkhead is similar to Piers 4, 5 and 6, except that the bottom of the marginal beam is at an elevation of one foot one inch above mean high tide, and the beam and sheet piling are of larger section, to take care of additional loads, due to the greater depth of water.

Two reinforced concrete piles, every 20 feet, centre to centre, 15 inches by 15 inches in section, were substituted for the cylinders.

Another noticeable difference may be seen in the sheet piling. The piling in Piers 4, 5 and 6 was 12-inch by 18-inch, 27 feet long, not interlacing or tongue and grooved and carried no jet pipe.

Here the piles are 19-inch by 24-inch, 30 to 45 feet long, with a 5 by 2½ inch tongue and groove, 2-inch jet pipe, and weighing from eight to ten tons.

Great difficulty was experienced in driving these piles. The character of bottom encountered was sand, mud and clay to 25 feet, then a stratum of sand and large coarse gravel. Fully 80 per cent. of all piles driven met with the above conditions and drove very hard; the remaining piles missed the stratum of kaolin and tended to dip and leave the work near the outer end.

Three jets were used, one attached to the 2-inch pipe in pile, and two others used on the outside; a 7,000-pound hammer was placed on top and the pile churned by raising and lowering in the leads of the machine. It was necessary to drive them to a penetration sufficient to insure a toe-hold.

This condition of kaolin, over coarse gravel, caused a blanketed condition, making the action of the jets almost useless; the jet forcing its way through this hard, pasty substance would lose its effectiveness out through the coarse gravel, and the condition looked for in all jetting work, that is the dislodging of material and boiling up at the surface, never appeared. Other methods were tried, but with little or no success; the work required a great deal of patience, it taking in some cases four hours to churn a pile. Where the condition of the bottom changed, a pile was driven in from five to ten minutes.

The weight of these piles, and the fact that there was not room at the site of pier to make and store them until seasoned, required that they be built elsewhere and brought to the work as needed. A site was secured and a Gantry crane constructed, the forms were set and the first piles cast. The mixer was so arranged as to dump into a bottom dump bucket, which in turn rolled on an "I" beam and could be drawn back and forth the length of the pile form. The crane would then advance to the next form and so continue until all piles for which forms had been constructed cast. In about two days the forms were removed from the piles first cast and carried ahead by the crane. After piles were a week old they were allowed to be carried on quarter points by the crane to a storage pile, where they remained four weeks until seasoned. They were then picked up on quarter points by a floating derrick, put on deck and taken to the work. There were a total of 1,600 piles used.

In the open work the bents are 10 feet centre to centre, and piles 11 feet centre to centre.

The bottom of the floor beams in the open work are a minimum of one foot one inch above mean high tide. It may be noted that the concrete was kept above water as much as possible.

The fender system consists of white oak piles, 10 feet on centre along the face of pier, blocked out with oak blocks, the piles being banded to the wall with wrought-iron straps and made fast by one-inch Richmond screw anchor bolts.

Piles are capped with twelve by twelve timbers and two feet nine inches above the water line is a runner of six by ten timber. In addition to that described, will be a floating fender of large juniper or white pine spars, chained to piles of the fender system.

The contract for the superstructure was awarded to the Singer-Pentz Company, the lowest bidders, on September 27, 1913; the estimated cost of the work being $242,000; the work to be completed March 1, 1914.

At the head of the pier is a building 145 by 86 feet, back of which the deck will be covered for a distance of 312 feet with head room of 22 feet.

The front portion of the building on Thames street will be a two-story structure, 140 feet in width by 90 feet in depth. This building will have a first floor, mezzanine and second floor.

On the first floor are located on either side of the main driveway offices in connection with the Commercial Pier, Harbor Master, freight offices, etc., together with toilet-rooms, boiler-room, fuelroom, etc.

On the mezzanine, additional office space is provided, and on the second floor will be the large assembly hall, with foyer and ante-rooms, etc., for the use of the public. This large assembly hall, 40 feet in width and 84 feet in length, opens on to the spacious stairways and runways leading to the floor above. At the end of the recreation deck will be two large additional stairways for the public, leading to the main deck of the pier.

The main front on Thames street is designed in tapestry brick with granite and limestone trimmings. The central feature is emphasized by a colonnade in the second story, opening off assembly hall and crowning the central archway of 50 feet span.

To the right and left are the public entrances to the recreation pier above, which the central archway leads to the commercial pier on the main floor.

The building is entirely of fireproof construction, of steel frame with brick walls and stone and granite trimmings. While simple in design, it has a decorative effect in its mass and proportions and will be a distinctive landmark among the public buildings of Baltimore.

The commercial end of the pier is frankly expressed in the treatment of the doorways, and this will be further enhanced by the color scheme in the painting of the wood and steel.

There is an open deck at the end of the pier of 95 feet by 150 feet. The covered deck, used for commercial purposes, will have a length of 312 feet by depth of 135 feet, and will be used as a municipal warehouse. Above this deck will be the promenade deck of the Recreation Pier, provided with awnings and shelters somewhat in the manner of the great steel piers at Atlantic City.

The bays are 20-foot centres, and between columns is a two-section Ogden type cargo door, 18 feet wide, 21½ feet high; the lower section is 8 feet and upper leaf 13 feet 6 inches. The columns are detailed to allow the chains and counter weights to slide vertically.

The lower section opens vertically and together with the upper section is swung inward and upward to a horizontal position, giving a clearance of 21½ by 18 feet. By means of gear wheels the doors are easily operated by a hand-chain.

The doors are of spruce and white pine, covered outside with No. 22 galvanized iron. Each door is provided with 80 square feet of one-quarter ribbed wire glass.

Mr. Theodore Wells Pietsch was the architect for the building.

The Harbor Board is better satisfied now than ever before that the City of Baltimore was wise in adopting a form of construction impervious to the teredo, and at the same time one which is cheaper and more permanent than a timber construction, with a large saving in maintenance. As has been stated, the teredo some years ago was found to exist about four miles down the river, but much to the surprise of this Board, when the digging out of the slips for the Recreation and Commercial Pier was under way, a great quantity of timber was removed from old piers, built perhaps thirty or forty years ago, which were riddled by the teredo. The conclusion drawn, was that the teredo, before the harbor became polluted, must have been quite active, and naturally, as the sewage is diverted from the harbor, his activities will again begin. There is no possibility that timber originally in this condition could have been placed in the work. It was quite noticeable in the timber ties that only that part of the timber exposed to the water had been touched by the teredo, the protected part being almost as sound as when first used. Since the sewage has been turned from the harbor, there has been a great increase in the sea life. Fish, crabs, etc., had not been seen or heard of in the upper harbor for many years, until about two years ago, when they became quite numerous. Tugboat owners and operators are complaining of the great increased growth of barnacles on the bottom of their vessels, all of which points to the fact that the water of the harbor will become as equally attractive to the teredo.

Proposed Improvements.

The proposed improvements and recommendations have been definitely outlined in the report of the Harbor Engineer to the members of this Board, which is most heartily endorsed by them and to which you are respectfully referred.

Respectfully submitted,

Oscar F. Lackey,
William D. Sanner,
James S. Armiger,
William G. Knapp,
Marcellus H. Goodrich,
Harbor Board.

BALTIMORE HARBOR

The Harbor of Baltimore is 170 miles from the sea and is well sheltered, being what is called a landlocked harbor with a mean tidal flow of about a foot and a half.

Many desirable tide water sites, with railroad connections, are available along nearby shores having high ground in the rear and bold water in front on both sides of a 35-feet deep channel in many places less than a mile therefrom.

Prior to the great fire of 1904 the city owned but little wharf property of importance. The fire made it possible to acquire all of the Burnt District fronting on the harbor (about 4,000 lineal feet), and under the Six Million Loan the city purchased the property and removed all buildings, streets, etc., and laid out a system of public wharves and docks south from Pratt street which has been made 120 feet wide, with many streets running into same, also widened and improved. The Public Wharves and Docks situated in the upper harbor are intended for the coastwise and bay trade. The Commercial (Recreation) Pier can be made available for transatlantic steamships with a depth alongside up to 35 feet.

Piers 1, 2 and 3 have been leased at 36 cents per square foot.

Pier 4 is at the foot of Market Place which has been widened to 150 feet. Along Market Place the city has erected three handsome comodious buildings, a Retail Market, a Fish Market and a Wholesale Market with a Comfort Station nearby, and all within a stone's throw of Pier 4, set apart for the use of the market boats.

For cost of piers see table in Harbor Board Report, 1911, page 30.

LOCATION OF PUBLIC WHARVES AND DOCKS.

	Average Length.	Total Area.
Municipal Pier, near foot Calvert street..	64 ft.	512 sq. ft.
Pier 1, foot South street	551 ft.	82,108 sq. ft.
Pier 2, foot Commerce street............	638 ft.	127,163 sq. ft.
Pier 3, foot Gay street....................	772 ft.	153,362 sq. ft.
Pier 4, foot Frederick street..............	927 ft.	178,875 sq. ft.
Pier 5, foot Market Place................	1,150 ft.	245,574 sq. ft.
Pier 6, foot West Falls avenue..........	1,450 ft.	218,797 sq. ft.
Pier 7, foot President street..............	400 ft.	40,000 sq. ft.
Pier 8, foot Albemarle street............	500 ft.	65,000 sq. ft.
Recreation Pier, foot Broadway.........	500 ft.	75,000 sq. ft.

Docks alongside Commercial Pier are 190 feet wide, 27 feet deep (can be made 35 feet deep); the other docks are 150 feet wide, 24 feet deep.

The channel from the ocean to Baltimore is 35 feet deep and 600 feet wide, Baltimore to near Sandy Point, and thence to the sea 1,000 feet wide.

The government anchorage basin opposite Quarantine station (near Fort Carroll) is 3,500 feet long, 600 feet wide, 35 feet deep.

There are no port dues.

WATER FRONT PATAPSCO RIVER AND TRIBUTARIES.

WHERE SHORE LINE FRONTS A CHANNEL 10 FEET DEEP OR MORE.

	Statute Miles.
Northwest Branch (Main Harbor)—	
Front feet of wharf room (1913) 145,700 feet	27¾
Main and Middle Branches—	
Light Street Bridge to Fort McHenry	2¼
Light Street Bridge to Old Quarantine	3
Spring Gardens (Middle Branch)	4¼
Patapsco River: South Shore—	
Old Quarantine to Bodkin Point	12¼
Curtis Creek	16½
Stoney Creek	8
Rock Creek	6
Bodkin Creek	8
Patapsco River: North Shore—	
Lazaretto to North Point	10½
Colgate Creek	2
Bear Creek	19½
Miles	120

WIDTH OF PATAPSCO RIVER.

	Statute Miles.
Lazaretto Light to Old Marine Hospital	1¼
Colgate Creek to Wagners Point	2¼
Sparrows Point to Hawkins Point	2¼
North Point to Bodkin Point	4¼

WIDTH OF CHESAPEAKE BAY.

At Howell Point	3
At North Point	9½
At Sandy Point	3¾
Cove Point	5¼
Potomac to Crisfield	20½
At York River	18
Mouth of Bay	12⅞

AREAS WITHIN BULKHEAD LINES.

	Sq. ft.	Sq. Miles.
Main Harbor—		
North of line from Lazaretto to Target (S. E. Fort McHenry)	36,052,800	1.293
Spring Gardens		
West of Light Street Bridge	27,345,600	0.981
Main Branch—		
Between Light Street Bridge and line from Lazaretto to extreme end of Marine Hospital Bulkhead	69,195,000	2.482
Patapsco River—		
Between line from Lazaretto to extreme end of Marine Hospital Bulkhead and line from North Point to Bodkin Point	815,947,900	29.268
	948,541,300	34.024

RATES OF PILOTAGE.

Vessels drawing 15 feet or over	$5.00 per foot.
Vessels drawing 12 to 15 feet	4.00 per foot.
Vessels drawing less than 12 feet	3 50 per foot.

TOWING RATES.

For Scows—

Within the city limits, from $1.50 to $3.50.

For Vessels

Within the city limits, from $1.50 to $35.00, depending on tonnage.

From the mouth of the Bay (loaded), from $124 for a 200 tonnage vessel to $425 for a 3,000 tonnage vessel.

Steamships Engaged in the Foreign Trade.

Johnston Line, Baltimore to Liverpool.
Furness Line, Baltimore to Leith.
North German Lloyd, Baltimore to Bremen.
Atlantic Transport Line, Baltimore to Havre.
Neptune Line, Baltimore to Rotterdam.
Lord Line, Baltimore to Belfast, Dublin and Cardiff.
Atlantic Transport Company, Baltimore to London.
Hamburg-American Line, Baltimore to Hamburg.

Donaldson Line, Baltimore to Glasgow.

United Fruit Company, Baltimore to Jamaica.

United Fruit Company, Baltimore to San Domingo.

Red Star Line, Baltimore to Antwerp.

Scandinavian-American Line, Baltimore to Copenhagen and Christiania.

Atlantic Fruit Company, Baltimore to Jamaica.

Atlantic Fruit Company, Baltimore to Cuban ports.

Lanassa & Goffe Steamship and Importing Company, Baltimore to Jamaica.

Munson Line, Baltimore to Havana.

Munson Line, Baltimore to Colon.

English-American Line, from Huelva, Spain, etc.

Creole Line, from Mediterranean ports.

United States Asphalt Refining Company, from Tuxpan and Tampico,, Mexico.

Earn Line, from Cuba

LOCAL STEAMSHIP COMPANIES ENGAGED IN COASTWISE AND BAY TRADE.

NAME.	Vessels.	Tonnage.	Schedule for Sailings.
Merchants & Miners Transportation Co..	13	Average gross, 3,000.	Three each week to Providence via Newport News and Norfolk, 3 each week to Boston via Newport News and Norfolk, 3 each week to Jacksonville via Savannah.
New York and Baltimore Transportation Line..........................	4	Average net, 850	Three each week to New York.
Baltimore Steam Packet Company–Old Bay Line......................	5	Average gross, 2,000.	Daily to Norfolk.
Chesapeake Steamship Company.......	5	Average gross, 2,400.	Daily to Norfolk, 3 times a week to Richmond via West Point, Va., and Southern Railway.
Baltimore, Chesapeake & Atlantic and Md., Del. & Virginia Railway Co. ...	30	Average net, 720	Averaging 70 each week, bay ports of Maryland and Virginia; also boat to Washington.
Baltimore and Philadelphia Steamboat Company.........................	4	Average net, 200	Daily, except Sunday, to Philadelphia via Chesapeake and Delaware canal; excursion boats daily, June 15 to September 15.
Tolchester Company..........	4	Average gross, 600...	One each day in winter to bay ports; excursion boats in summer.
Baltimore and Carolina Steamship Co..	3	Average gross, 1,373.	Once a week to Georgetown and Charleston.

LEASES BY ORDINANCES.

Second Branch 282 (Journal October 27, 1913):

Lease for terms not exceeding three years.

Light and Barre Streets:
September 24, 1913—Ordinance S. B. 275,
Baltimore Steam Packet Company.

Light and Conway Streets:
1909-10—Ordinance 465, page 263,
Maryland, Delaware and Virginia Railway Company.

Light and Camden Streets:
1908-09—Ordinance 319, page 674,
Baltimore, Chesapeake and Atlantic Railway Company.

Light and Pratt Streets:
1907-08—Ordinance 105, page 181,
Baltimore and Philadelphia Steamboat Company.

Pier 1, Pratt Street:
1907-08—Ordinance 124, page 227,
Baltimore, Chesapeake and Atlantic Railway Company.
1907-08—Ordinance 134, page 264,
United Fruit Company.
1908-09—Ordinance 199, page 456,
Baltimore, Chesapeake and Atlantic Railway Company.
1908-09—Ordinance 200, page 459,
United Fruit Company.

Pier 2, Pratt Street:
1907-08—Ordinance 126, page 239,
Standard Oil Company.
1907-08—Ordinance 127, page 249,
Lanasa & Goffe Steamship and Importing Company.
1908-09—Ordinance 169, page 384,
Atlantic Fruit Company.
1908-09—Ordinance 203, page 465,
Martin Wagner Company.

1909-10—Ordinance 330, page 3,
Standard Oil Company.
1909-10—Ordinance 407, page 150,
Arundel Sand and Gravel Company.
May 13, 1913—By Board of Estimates,
Baltimore and Carolina Steamship Company.

Second Branch (Journal October 27, 1913):

Surrender of lease by Ordinance 127, May 21, 1908.

Pier 3, Pratt Street:
1906-07—Ordinance 282, page 309,
Merchants and Miners Transportation Company.

Pier 5, Pratt Street:
1909-10—Ordinance 455, page 246,
Baltimore Steam Packet Company.

WATERFRONT TERMINALS.

Canton Company and Canton Railroad.

Canton Company owns large waterfront, partly improved, and is connected by Canton Railroad, eight miles long, with the Baltimore and Ohio Railroad, the Pennsylvania Railroad and the Western Maryland Railway.

Has one pier 200 feet long by 100 feet wide, with warehouse 200 feet by 80 feet and small warehouse in rear.

Has under construction one fireproof pier 800 feet long by 150 feet wide with iron shed and, adjacent to a dock 150 feet wide by 1,200 feet long, will be built of reinforced concrete, with sprinkler system, a six-story warehouse 200 feet long by 80 feet wide.

Has constructed another dock 1,400 feet long by 200 feet wide and is filling in behind the bulkheads.

Has under consideration a new pier 1,000 feet long by 150 feet wide.

Has new railroad yard with two miles of track and a ferry slip for transfer of cars on barges.

BALTIMORE AND OHIO RAILROAD COMPANY.

The Locust Point terminal of this Company is the largest on the Atlantic Seaboard. There millions of tons of freight are imported and exported annually and thousands of immigrants are landed each year. Locust Point covers a mile of waterfront and is situated directly behind historic Fort McHenry. This terminal is well appointed, with a system of spacious docks, large freight and coal piers and mammoth grain elevators with capacity of 2,500,000 bushels, and it is equipped with modern apparatus for fire protection with a high-pressure pipe line system supplied by pumps having a capacity of 4,750 gallons a minute.

Has 11 piers—nine covered and two open—with an aggregate floor space of about 857,000 square feet. Pier 8 is the largest and is 980 feet long and 160 feet wide with a two-story shed, 941 feet by 138 feet, of 259,000 square feet of floor area. It is equipped with the Telpherage system operated by electricity on a series of overhead tracks (1½ miles) on which 20 carriers handle freight about the piers (10 of 2-ton and 10 of 4-ton capacity). Pier 9, the next largest, is 855 feet long by 160 feet wide, with a two-story shed, 800 feet by 138 feet, of 220,800 square feet of floor area. The second floor is used as an immigrant station and a section of the pier is used as a bonded warehouse for dutiable imports.

The terminal was established in 1858, when the famous Baltimore clippers were monarchs of the sea. In 1865 the railroad company purchased four steamers from the government and established a transatlantic line to European ports. In 1868 the North German Lloyd established service between Locust Point and Bremen. In 1913 eight lines make regular sailings from the terminal and 1,800 workmen are employed there.

At Curtis Bay the railroad company has the largest and one of the best equipped coal terminals on the Atlantic Coast.

The world's record for loading a vessel with a cargo of coal is held by the Curtis Bay terminal. On November 23, 1912, the Collier "Newton" was loaded in three hours and 45 minutes, 7,500 tons. In 1913 the hard and soft coal handled at Curtis Bay and Locust Point amounted to 3,191,421 tons. At Curtis Bay this Company also has a one-story covered pier 100 feet by 820 feet of 52,560 square feet capacity (150 cars), for export and import freight other than coal.

PENNSYLVANIA RAILROAD COMPANY.

(Philadelphia, Baltimore and Washington Railroad Company and Northern Central Railway Company.)

Handles a vast traffic over the following piers, with width of docks between of from 40 to 180 feet (all new docks to be 200 feet wide). The maximum depth of docks being 32 feet.

Pier 1½ (Clinton Street)—160 feet 6 inches by 26 feet 3 inches. Open pier with two tracks and capacity of eight cars. For traffic by lighters to and from wharves in harbor.

Pier 2 (Clinton Street)—500 feet by 70 feet. Covered pier with two tracks and storage capacity of 30 cars. For inbound and outbound traffic of bay and coastwise steamers, mainly by lighters.

Pier 3 (Clinton Street)—929 feet 4 inches by 121 feet Covered pier with two tracks and storage capacity of 200 cars. For storage and handling of export and import traffic.

Pier 4 (Clinton Street)—932 feet by 100 feet. Covered pier with two tracks and storage capacity of 175 cars. For coastwise and export traffic.

Pier 5 (Clinton Street)—500 feet by 35 feet. Open pier with three tracks and capacity of 36 cars. For traffic to and from steamships docking at other terminals. Poles, piling and railroad ties also handled at this point.

Pier 6 (Clinton Street)—935 feet two inches by 120 feet. Covered pier with two tracks and storage capacity of 200 cars. For the storage and handling of export and import traffic.

Pier 7 (Clinton Street)—50 feet wide by 780 feet on north side and 932 feet on south side. Open pier with four tracks and capacity of 96 cars. For export and import traffic to and from steamships docking at other terminals and also for river, bay and coastwise traffic and for handling phosphate rock, lumber, etc.

Washington Shed (Clinton Street)—210 feet 6 inches by 24 feet. With one track alongside and capacity of six cars and storage capacity of five cars. For less than carload traffic from local concerns by wagon.

Storage Warehouse (Clinton Street)—135 feet by 83 feet. For handling traffic to and from Bay Line points, received from and delivered to lighters.

Bonded Warehouse (Clinton Street)—270 feet by 42 feet. For traffic in bond.

Coal Pier (Clinton Street)—780 feet 10 inches by 47 feet. This is a high pier with two tracks and capacity of 60 cars for the delivery of coal and coke to vessels and bunker coal to tugboats and to lighters.

Ore Pier (Lower Canton)—1,108 feet by 62 feet. Open pier with four tracks and capacity of 110 cars. For the handling of full cargoes of rough freight—steel rails, structural iron, etc.—and for inbound cargoes of foreign ores, ferro-manganese, spiegeleisen, etc.

Elevator No. 1 (Clinton Street)—498 feet by 100 feet. Capacity 500,000 bushels of grain.

Elevator No. 3 (Lower Canton)—603 feet by 122 feet 7 inches. Capacity 1,000,000 bushels; connected with this elevator are concrete storage bins with an additional capacity of 1,000,000 bushels.

Pier 3 (Boston Street)—398 feet by 50 feet. With three tracks and capacity of 30 cars. For anthracite coal.

Pier 4 (Boston Street)—396 feet by 100 feet. With five tracks and capacity of 55 cars. For anthracite coal.

Barge Slip (Boston Street)—For transfer of loaded cars.

Jackson's Wharf (Foot of Bond Street)—For handling local freight and interstate traffic.

WESTERN MARYLAND RAILWAY COMPANY.

Has every facility for prompt handling of shipments at Port Covington terminal, with every modern device for unloading coal from cars and loading same on vessels.

Has three large piers—one coal pier 1,295 feet long; one covered pier 836 feet long by 120 feet wide; one open pier 830 feet long by 60 feet wide, with depth alongside of 32 feet, has four tracks and is equipped with locomotive cranes.

Has pontoon bridges for transferring cars on barges; and has storage capacity at Port Covington for 2,000 freight cars with over 60 tracks in service.

CHESAPEAKE BAY

DISTANCES FROM LIGHT STREET WHARF
BALTIMORE, MD.

(Following usual water route, the distance is abreast of point named, unless otherwise stated.)

PATAPSCO RIVER.

Nau. Miles.	Stat. Miles.			Stat. Miles	Nau. Miles.
2	2¼	Fort McHenry Wharf.			
			Lazaretto Lighthouse........	2½	2¼
			Fort Carroll	7	6
6	7	Hawkins Point.			
			Sparrows Point Wharf No. 9..	8	7
9¼	10¾	Rock Point.			
			North Point Lighthouse (Fort Howard)	11	9½
13½	15½	Bodkin Point.			

DOWN THE BAY.

		Western Shore.	*Eastern Shore.*		
12¼	14	Seven-Foot Knoll Lighthouse.			
			Swan Point.................	20¾	18
18	20¾	Baltimore Lighthouse.			
			Love Point Lighthouse......	24	20¾
20¾	24	Sandy Point Lighthouse.			
23½	27	Hackett Point.			
26	30	Greenbury Point Lighthouse.			
28½	32¾	Annapolis, off Naval Academy.			
26¼	30¼	Tolly Point.			
28	32¼	Bay Ridge, to wharf.			
28¼	32½	Thomas Point Lighthouse.			
			Bloody Point Lighthouse....	36½	31¾
			Eastern Bay, entrance between Buoys Nos. 1 and 2..	41¼	35¾
			Poplar Island Harbor........	47¼	41
39	45	Herring Bay Beacon.			
40½	46¼	Fair Haven, to wharf.			
39	45	Holland Point.			
41¾	48	Chesapeake Beach, to long wharf.			
			Tilghmans Island Wharf.....	59¼	51½
46¼	53¼	Plum Point, to landing.			

DOWN THE BAY—*Concluded.*

Nau. Miles.	Stat. Miles.	*Western Shore.*	*Eastern Shore.*	Stat. Miles.	Nau. Miles.
			Sharps Island Lighthouse	50¾	44
			James Point	58¼	50½
52½	60½	Governors Run, to wharf.			
			Taylors Island, north end	62¼	54
59	68	Cove Point Lighthouse.			
67¼	77½	Solomon's Island.			
			Hooper's Island Lighthouse	78½	68¼
			Bloodsworth Island, north end	91	79
75¼	86½	Point No Point Lighthouse.			
			Holland Bar Lighthouse	94¾	82¼
81½	94	Point Lookout Lighthouse.			
			Smith Island, north end	97	84½
91½	105½	Smith Point Lighthouse.			
			Tangier Island, north end	107¼	93
97	111¾	Fleet Point Lighthouse.			
			Tangier Island, off Spar Buoy No. 12	113¼	98¼
			Pocomoke Sound, abreast of Buoy No. 2	127¾	111
110	126¾	Windmill Point Lighthouse.			
111¼	128¼	Stingray Point Lighthouse.			
121¼	139¾	Wolf Trap Lighthouse.			
127¾	147¼	Horn Harbor, half mile inside.			
126¾	146	New Point Comfort Lighthouse.			
132	152	Mobjack Bay, abreast of Buoy No. 2			
			Cherrystone Lighthouse	148¼	128¾
			Old Plantation Lighthouse	149¾	130
132	152	York Spit Lighthouse.			
			Fisherman's Island, to Quarantine Wharf	161	139¾
			Cape Charles Lighthouse, to wharf	170½	148
139½	160½	Back River Lighthouse.			
143¾	165½	Thimble Shoal Lighthouse.			
150	173	Cape Henry Lighthouse.			

UP THE BAY.

Nau. Miles.	Stat. Miles.	*Western Shore.*	*Eastern Shore.*	Stat. Miles.	Nau. Miles.
9½	11	North Point Lighthouse.			
12½	14½	Bug Lighthouse, front range, Craighill Channel.			
13¾	16	Miller's Island Lighthouse.			
			Tolchester Beach, to wharf..	23	20
20¾	24	Poole's Island Lighthouse.			
24	27½	Lego Point.			
			Worton Point................	30¾	26¾
			Howell Point................	36¼	31½
			Grove Point.................	40¼	35
37¾	43½	Spesutie Island, Sandy Point.			
			Turkey Point Lighthouse....	44	38¼
40¼	46½	Fishing Battery.			
44	50½	Havre de Grace.			
			Perryville, P. R. R. Bridge..	51¾	45

FOREIGN CONSULAR OFFICERS IN BALTIMORE.

Country.	Name.	Address.
Argentina	James F. Ferguson	307 Vickers Building.
Austria-Hungary	G. Louis Hester	315 South Charles street.
Belgium	A. T. Leftwich	211 South Charles street.
Bolivia	Raymond M. Glacken	2443 North Charles street and 211 North Calvert street.
Brazil	Léonce Rabillon	702 American Building.
Chile	R. G. Leupold	223 East Preston street and 641 Calvert Building.
Colombia	William A. Riordan	Southwest corner Gay and Lombard streets.
Costa Rica	William A. Riordan	Southwest corner Gay and Lombard streets.
Congo Free State	James G. Whitely	223 West Lanvale street.
Cuba	Oscar Ramos Ortega	507 North Eutaw street.
Denmark	Holger A. Koppel	400 Carroll Building.
Dominican Republic	William A. Riordan	Southwest corner Gay and Lombard streets.
Ecuador		
France	Léonce Rabillon	702 American Building
German Empire	Carl A. Luderitz	Northeast corner Charles and German streets.
Great Britain	Gilbert Fraser	Macht Building, 11-13 East Fayette street.
Guatemala	C. Morton Stewart, Jr	Southwest corner Gay and Lombard streets.
Haiti	William A. Riordan	Southwest corner Gay and Lombard streets.
Italy	Giovanni Schiaffino	220 North Eutaw street.
Honduras	C. Morton Stewart, Jr	Southwest corner Gay and Lombard streets.
Mexico	Manuel Cuesta	307 Vickers Building.
Liberia	W. E. Hoffman	1101-02 Fidelity Building.
Netherlands	R. H. Mottu	United States Fidelity and Guarantee Company Building.
Nicaraugua	William A. Riordan	Southwest corner Gay and Lombard streets.
Norway	Arthur Frederick Sidebotham	317 Chamber of Commerce Building.
Panama	James F. Ferguson	307 Vickers Building.
Paraguay		
Peru	O. G. H. E. Kehrhahn	Continental Building.
Portugal	Adelbert W. Mears	117 Commerce street.
Russia	C. C. Foncett	506 Continental Building.
Spain	Giovanni Schiaffino	220 North Eutaw street.
San Salvador	C. Morton Stewart, Jr	Southwest corner Gay and Lombard streets.
Sweden	Paul Gerhard Luediger Hilken	Northeast corner Charles and German streets.
San Domingo	William A. Riordan	Southwest corner Gay and Lombard streets.
Uruguay	Léonce Rabillon	702 American Building.

VESSELS ENTERED AND CLEARED IN UNITED STATES CUSTOM HOUSE.

ENTERED.	Class.	1912.		1913.	
		No.	Tons.	No.	Tons.
Nationality—					
American	Sail	8	3,471	8	6,321
American	Steam..	1	2,539	4	6,586
Foreign	Sail	12	16,288	6	6,398
Foreign	Steam..	555	1,266,552	699	1,627,492
Coastwise	....	1,584	2,829,451	1,640	2,975,207
Total.............	....	2,160	4,118,301	2,357	4,622,004

CLEARED.	Class.	1912.		1913.	
		No.	Tons.	No.	Tons.
Nationality—					
American	Sail	17	13,118	17	9,669
American	Steam..	1	1,992	5	7,842
Foreign	Sail	7	6,908	4	4,814
Foreign	Steam..	642	1,586,587	795	1,934,898
Coastwise	....	1,856	2,891,950	1,916	3,120,848
Total.............	....	2,523	4,500,555	2,737	5,078,071

IMMIGRANTS.

1912.	Amount.	1913.	Amount.
Number .....28,200 Head Tax.... $4.00	$112,800.00	Number .....41,920 Head Tax $4.00	$167,680.00

Note—The above only refers to vessels entered and cleared in the United States Custom House.

TABLES

DREDGING HARBOR.

Year Ended December 31, 1913.		Dr.	Cr.
Appropriation.			
Ordinance No. 170, November 26, 1912			$55,277 00
Refund account anchorage buoys			5 00
Received from sale of calcium hypochlorite			260 00
Received for private dredging			602 55
Expenditures.			
Maryland Dredging and Contracting Co, 129,305 cu. yds. at 18½c., 50,379 cu. yds. at 18½c., 41,874 cu. yds. at 15c		$39,522 63	
Advertising		20 42	
Supervision of dredging		3,131 26	
Surveys		3,991 48	
Anchorage buoys		47 90	
Department launch		11 39	
National Association of Port Authorities		50 00	
Trip to convention of National Association of Port Authorities		156 60	
Printing Harbor Laws (⅓ paid by City Comptroller)		154 44	
Harbor odors		275 75	
Tug Baltimore:			
Crew	$5,485 83		
Fuel	727 56		
Repairs	1,674 06		
Supplies	768 55		
Subsistence	10 67		
Uniforms	106 00		
Boat	10 00		
		8,782 67	
Unexpended balance		01	
Totals		$56,144 55	$56,144 55

SALARIES.

Year Ended December 31, 1913.	Dr.	Cr.
Appropriation.		
Ordinance No. 170, November 26, 1912		$6,130 00
Expenditures.		
Salaries	$5,669 84	
Unexpended balance	460 16	
Totals	$6,130 00	$6,130 00

LIGHT STREET BRIDGE.

Year Ended December 31, 1913.		Dr.	Cr.
Appropriation.			
Ordinance 170, November 26, 1912			$16,619 00
Received from United Railways and Electric Company			172 25
Expenditures.			
Advertising	$9 50		
Lights	110 09		
Crew	5,051 92		
Extra Crew	3,567 25		
Repairs	289 11		
Supplies	539 69		
Fuel	269 18		
Lumber	6,919 88		
		$16,756 62	
Unexpended balance		34 63	
Totals		$16,791 25	$16,791 25

ICEBOATS.

YEAR ENDED DECEMBER 31, 1913.			Dr.	Cr.
Appropriation.				
Ordinance No. 170, November 26, 1912				$23,430 00
Acts 1912, Chapter 334				5,000 00
Received for use of Iceboat for pulling off steamer, ashore				48 00
Expenditures.				
	"*Annapolis.*"	"*Latrobe.*"		
Advertising	$12 02	$12 03		
Crew	5,000 85	8,010 35		
Fuel	263 00	503 50		
Supplies	889 64	1,213 36		
Repairs	4,407 10	3,713 01		
Telephone	35 73	35 72		
	$10,608 34	$13,487 97		
			$24,096 31	
Unexpended balance			4,381 69	
Totals			$28,478 00	$28,478 00

INCIDENTALS.

YEAR ENDED DECEMBER 31, 1913.		Dr.	Cr.
Appropriation.			
Ordinance No. 170, November 26, 1912			$500 00
Expenditures.			
Oaths	$1 50		
Postage	42 16		
Telephone and telegrams	14 99		
Engineering papers	3 00		
Annual reports	46 10		
Harbor Engineer to Norfolk	25 50		
Office supplies	45 46		
Clerk's bond	6 25		
Cigars for Board	31 13		
Lunch (Board meetings on boat)	179 08		
		$395 17	
Unexpended balance		104 83	
Totals		$500 00	$500 00

REPAIRS OF WHARVES.

Year Ended December 31, 1913.		Dr.	Cr.
Appropriation.			
Ordinance No. 170, November 26, 1912			$7,300 00
Received for hire of derrick scow			711 75
Received from Commissioner of Street Cleaning for repairs to garbage dump			1,068 00
Expenditures.			
Advertising	$19 18		
Pier foot of Calvert street	33 43		
Launch "Julia"	756 82		
Department shed	186 42		
Signs	22 11		
Derrick scow	25 56		
General repairs	21 81		
Pier 1, Pratt street	3 00		
Pier 3, Pratt street	5 50		
Pier 4, Pratt street	68 12		
Pier 5, Pratt street	117 10		
Pier 7, President street	331 24		
Pier 8, Albemarle street	515 38		
Driveway, Pier 8	1,435 84		
Repairs to Centre Pier	1,396 95		
Garbage dump, Centre Pier	1,068 00		
Grading and paving Centre Pier	1,572 65		
Supervision	1,500 00		
		$9,079 11	
Unexpended balance		64	
Totals		$9,079 75	$9,079 75

REMOVAL OF ASHES.

YEAR ENDED DECEMBER 31, 1913.		Dr.	Cr.
Appropriation.			
Ordinance 170, November 26, 1912			$1.100 00
Expenditures.			
Supplies	$14 50		
Supervision	600 00		
		$614 50	
Unexpended balance		485 50	
Totals		$1,100 00	$1,100 00

REMOVAL OF FLOATING MATTER.

YEAR ENDED DECEMBER 31, 1913.		Dr.	Cr.
Appropriation.			
Ordinance 170, November 26, 1912			$1,935 00
Expenditures.			
Wages	$1,650 50		
Outfit	123 92		
		$1,774 42	
Unexpended balance		160 58	
Totals		$1,935 00	$1,935 00

SALARIES, PUBLIC WHARVES AND DOCKS.

Year Ended December 31, 1913.				Dr.	Cr.
Appropriation.					
Ordinance 170, November 26, 1912					$19,068 00
Expenditures.					
Items.	Pratt Street.	Recreation Pier.	South Side Harbor.		
Engineers	$1,156 50	$3,855 83	$2,185 01		
Draftsmen	82 50	1,299 50	74 50		
Rodmen	215 00	1,094 00	528 25		
Inspectors	395 00	1,560 00	1,479 00		
Assistant clerk and stenographer	216 00	432 00	432 00		
Watchman	126 40	252 80	252 80		
Timekeeper	216 45	428 40	428 40		
Launch "Major"	126 20	252 40	252 40		
Supervision of dredging		926 00			
Totals	$2,534 05	$10,100 93	$5,632 36		
Total				$18,267 34	
Unexpended balance				800, 66	
Totals				$19,068 00	$19,068 00

PRATT STREET BRIDGE.

Year Ended December 31, 1913.		Dr.	Cr.
Appropriation.			
Unexpended balance of 1912			$74,359 64
Expenditures.			
Office expenses	$4 57		
Engineering expenses	40 15		
Ducts	33 87		
Lights	224 85		
D. V. Ault & Co.	19,460 31		
		$19,763 75	
Balance carried forward		54,595 89	
Totals		$74,359 64	$74,359 64

RECREATION PIER.

Year Ended December 31, 1913.		Dr.	Cr.
Appropriation.			
Unexpended balance of 1912			$308,323 52
Ordinance 170, November 26, 1912			150,000 00
Refund by Wm. L. Miller & Luke D. Mullen			11,293 19
Expenditures.			
Engineering supplies	$779 43		
Office expenses	302 02		
Launch "Major"	314 38		
Advertising	138 14		
Maryland Dredging & Contr. Co.	42,083 29		
Wm. L. Miller and Luke D. Mullen	149,175 48		
Advance to Wm. L. Miller and Luke D. Mullen	11,293 19		
Singer-Pentz Co.	42,210 00		
Architect	5,000 00		
Concrete float	494 93		
Property	3,939 47		
Examination of titles	162 40		
Recording deeds	5 75		
		$255,898 48	
Balance carried forward		213,718 23	
Totals		$469,616 71	$469,616 71

SOUTH SIDE HARBOR.

Year Ended December 31, 1913.		Dr.	Cr.
Appropriation.			
Unexpended balance of 1912			$633,414 97
Received for rent			2,313 26
Received from sale of buildings			1,265 60
Forfeited for plans			10 00
Expenditures.			
Engineering supplies	$1,129 32		
Office expenses	182 72		
Launch "Major"	324 36		
Advertising	117 51		
Establishing grades	204 01		
Consolidated Engr. Co	26,701 47		
M. J. Beach	3,194 79		
R. C. Hoffman & Co.	8,683 04		
Paving	557 48		
Property	81,547 66		
Repairs to property	409 50		
Examination of titles	2,255 25		
Recording deeds	111 75		
Taxes	1,442 10		
Water rents	90 77		
Ground rents	770 50		
		$127,722 23	
Balance carried forward		509,281 60	
Totals		$637,003 83	$637,003 83

DEPOSITED IN CITY TREASURY.

Account of Public Wharves and Docks—		
South Side Harbor:		
Received for rent	$2,313 26	
Blake's contract paid	900 00	
Other buildings	365 60	
Forfeited for plans	10 00	
		$3,588 86
Recreation Pier:		
Refund by Wm. L. Miller & Luke D. Mullen		11,293 19
Account of Dredging Harbor:		
Refund for anchorage buoy	$5 00	
Sale of calcium hypochlorite	260 00	
Private dredging	602 55	
		867 55
Account of Iceboats:		
Pulling off steamer		48 00
Account of Repairs of Wharves:		
Hire of derrick scow	$711 75	
From Commissioner of Street Cleaning	1,068 00	
		1,779 75
Account of Light Street Bridge:		
From United Railways and Electric Company		172 25
Revenue Account:		
Use of telephone	$10 45	
Sale of blueprints	2 25	
Sale of junk	70 77	
Towing raft	5 00	
		88 47
Total		$17,838 07

See 1912 Report, Page 63—Should have been printed:

South Side Harbor:		
Blake's contract paid	$1,560 00	
Received for rent	1,256 10	
For sale of shed	50 00	
Forfeited for plans	2 00	
		2,868 10
Recreation Pier:		
Larkin's contract	$2,100 00	
Dinsmore's contract	1,405 00	
McLean's contract	1,860 00	
Received for rent	4,125 81	
Forfeited for plans	6 00	
		9,496 81

Respectfully submitted,

Approved: JAMES H. IRVIN, *Clerk.*

O. F. LACKEY, *Harbor Engineer.*

HARBOR ENGINEER'S REPORT.

BALTIMORE, January, 1914.

To the Members of the Harbor Board.

GENTLEMEN—A plan for the best development of Baltimore's port, like that of any other port, depends first, on the present needs, and second, on what might reasonably be considered the immediate and more future needs.

Baltimore has, by its recent construction of piers, taken care of the immediate needs, but no definite provision has been made for the future. You cannot plan a harbor development and successfully carry it out, unless you know, or have every reason to believe, the purpose for which piers are to be used. I mean by this, it should be known whether the piers are to be for local, coastwise, or foreign trade.

It would be poor policy, and result disastrously, for the city to lay out piers to amply provide for local trade, and find they are needed for foreign trade, and it would result in a large loss of money to construct piers for foreign trade to take care of the smaller vessels engaged in bay or coastwise trade. Likewise, the class of cargo enters largely into the question of port development.

A coal pier would not do for grain or general merchandise, nor vice versa, so we must select those parts of the harbor best adaptable to developments to meet the various requirements of the shipping interests. To do this, requires that the city own and control her entire waterfront, and not take a dozen bites out of the same cherry. To continue as Baltimore has started will result in the sacrifice of our waterfront to immediate needs and leave us nothing for the future.

The Fifty Million Loan.

In 1910, after mature consideration, and viewing what great preparations the Pacific and Atlantic ports had under way, the Harbor Board of Baltimore felt justified in recommending the passage of a fifty million loan, providing for greater public wharves and docks, in order to be ready quickly to utilize allotments of said loan to construct modern wharves with wide and deep docks alongside when authorized to do so by vote of the people.

The Legislature, in its wisdom, cut down this loan to five million, but the Harbor Board still feels that time will justify its action in recommending the passage of the fifty million loan.

Had this recommendation of the Harbor Board been approved, it would have given a working capital large enough, not only to take care of the immediate needs of the shippers, but would have further enabled the city to buy unimproved waterfront property, construct bulkheads and reclaim large areas of land, admirably located for manufacturing and industrial purposes. When all is told, it is the manufacturing industries of a city that make the port. The bringing in of the raw material and taking out of the manufactured article not alone increases the activity of the port, but with excellent facilities, such as the city should provide, the backbone of the community is strengthened by additional manufacturing and industrial plants.

In addition to knowing the trade conditions and the cargo to be handled, it is absolutely essential to have determined a fixed policy. Does the city propose to take over its waterfront, or continue the present policy of sticking a pier here and there at irregular intervals to meet the immediate demands?

It would be poor business policy, with a capital of three million ($3,000,000) dollars to undertake to finance a fifty million ($50,000,000) dollar improvement. If three million ($3,000,000) dollars is all that is available, or likely to become available for harbor improvements, it can much better be spent, as has been the custom of the city, on the construction of one or two piers, rather than to use it in connection with work that would require a much larger sum and have virtually nothing to show when the appropriation was exhausted. If the harbor is to be considered as a whole, then a definite fixed policy should be adopted, after assurance has been given that enough money will be appropriated from time to time to complete the improvement.

Little or nothing can be done now with the upper harbor, except at an almost prohibitive cost. There fortunately remains miles of the most desirable waterfront, both on the Middle and Main Branches of the Patapsco River, that are subject to treatment, and which will amply provide for all future needs.

Harbor Organization.

In reference to the administration of the affairs of the harbor of Baltimore, I feel that the present organization is equal to that of most ports and superior to that of others. It might be wise to increase the membership to seven, by adding a representative from Anne Arundel County, and one from Baltimore County, being the two counties bordering on the Patapsco River. These two additional members to be appointed by the Governor of the State at the same time as the members of the Board are now appointed by the Mayor, and to serve four years; the Board to remain a city Board, subject to the ordinances of the Mayor and City Council of Baltimore, as now provided.

Increasing the present Board, by adding two members as representatives of the State, with the idea that such an addition will help the city to secure State aid from the Legislature for harbor improvements, would possibly create a rivalry between the city, State and counties, which at this time does not exist.

When port development is under consideration there should be no issue between the city and State. The port should include the waters of the Patapsco River and its tributaries and a successful development requires that it be treated as a whole and be improved, as demand arises, regardless of whether such improvements are within or without the city limits.

As an example of what could and likely would be the results of an increase in the Board, as above mentioned, when the majority of the members sought to secure State aid for improvements lying in Anne Arundel County, some exception might be taken by the representative from Baltimore County, or vice versa, and instead of being a help toward securing State aid, they might, on the other hand, work to defeat a measure which would add to one county and not to the other; it is possible that city improvements would be looked at in the same way. In fact this rivalry would not be confined to the members of the Board, but would crop up among the Legislators representing these counties. Of course this rivalry could not exist were the counties not represented on the Board, but it is hardly as likely, for there could be no criticism of the inactivity on the part of any member for not working for the direct interest of the county he represents, at the sacrifice and loss to the port.

The City of Baltimore, since the fire of 1904, has spent for property and the actual construction of its present pier system, five million nine hundred and eighty-seven thousand ($5,987,-000) dollars, eight hundred thousand ($800,000) dollars of which is for the Commercial and Recreation Pier at the foot of Broadway, and not yet completed. This does not include maintenance, Pratt Street Bridge, nor the Key Highway, but does include paving on piers, widening and paving of Broadway, widening and paving of Thames street, between Broadway and Ann street, and the widening and paving of Ann street, from Thames street south to the waterfront. The city is receiving on the investment about one hundred and seventy thousand ($170,000) dollars, which there is every reason to suppose will be increased by at least thirty thousand ($30,000) dollars in 1914. To this should be added any revenue that may be collected from the pier at the foot of Broadway. Assuming this for the first year at fifteen thousand ($15,000) dollars, the total collections will be two hundred and fifteen thousand ($215,000) dollars, which, capitalized at 3½ per cent., is six million one hundred and forty-two thousand eight hundred and sixty ($6,142,860) dollars.

This revenue should increase yearly and result finally in a net profit to the city, or in an amount sufficient to pay the interest on bonds and provide a sinking fund for an additional loan or bond issue for new improvements.

It is only right and fair, as the growth of the State depends largely on the growth of the port of Baltimore, that the city should be given State aid in connection with its waterfront improvements. To bring about this end, I do not feel that any part of the harbor should be turned over to State control, nor do I see any necessity for the appointing of a special commission to provide for its future development. I believe that State aid can be brought about just as readily under the present organization as it could under State control.

The deveolpment of the port of Baltimore since 1904 has been made possible by bond issues, city bonds bearing 3½ and 4 per cent. interest being sold subject to the condition that the interest and sinking fund be provided for in the annual Ordinance of Estimates, so that any Legislature placing the present Board under State control would not relieve the city of its present obligations. In either event, whether bonds are State or city bonds, legislative authority must first be had, and I am of the opinion that it would be easier to secure the passage of an Act authorizing the sale of city bonds, the said Act to provide that the State will add to its tax rate an amount sufficient to take care of a proportional part of the interest and sinking fund, the balance to be taken care of by the city, than it would be did the Act provide that all of the interest and sinking fund must be taken care of by the State.

It would be a very difficult matter to impress upon the members of the Legislature the importance of improvements in the port of Baltimore, when they know that any money appropriated for such developments would have to be paid for by the counties they represent, which are only indirectly interested and benefited.

The work in connection with the Harbor Board is entirely separate and distinct from the work of the other engineering departments of the city government, in consequence of which there is no occasion for the duplication of work.

There is nothing as important to the welfare of the City of Baltimore as its port.

The study of its development is one entirely distinct from that of other departments, and the field is very broad and requires undivided attention, thought and consideration, and should be set apart and not incorporated with the other departments under one head.

Special Commission.

The city would certainly not consider turning over its present waterfront holdings, costing nearly six million ($6,000,000) dollars, unless the State reimbursed the city, which the State would most likely decline to do, in consequence of which the present piers would have to remain under city control, or a harbor board. If then, under city control, why the need of appointing a special commission for the purpose of considering the future development, either within or without the upper harbor of Baltimore?

I have already stated I do not believe the creating of such a board, or adding to the present one, would have any additional weight or influence in securing State aid for harbor work. Unless the present Board is abolished, it would result in a duplication of work and add to the overhead expenses, with two bodies working at cross purposes, from which no benefits could possibly be derived.

If it is a question of efficiency, either in administration or construction, then again I. see no reason for a special commission, for I say without any egotism that I do not believe a commission could be selected for the purpose of planning any improvements for the port of Baltimore that would be as well qualified to pass upon such matters as the present Harbor Board, one of whose members has been connected with waterfront improvements for eight years, two others for six years and other two for two years.

The waterfront, or harbor of Baltimore, has become vastly important to the taxpayers as a valuable asset, capable of growing to be more valuable in increased revenues as the system of public wharves and docks is enlarged or extended. The work already done and the suggestions made for additional improvements will show how well the Harbor Board has done its duty and how constant has been its effort to add to the importance of the port of Baltimore by timely recommendations often in the face of great opposition, but the Harbor Board feels that the benefits arising out of the recommendations adopted and put into the shape of complete work, strongly serve to call renewed attention to those recommendations deferred to a later date for adoption, as the Board still feels many are so important that they will eventually be adopted.

A summary of the work done and suggestions made by the Harbor Board from 1907 to 1914 will show that an effort was made to lease the public piers on short term leases, further providing when the piers under lease were not occupied by vessels belonging to the lessee that the harbor masters should have the privilege to dock any other vessels and charge the regular rates for wharfage and dockage, the Harbor Board feeling that such a method would very materially increase the effectiveness of the system.

An effort was made to have the City of Baltimore construct and control all buildings on public piers. This recommendation was disapproved, and the Harbor Board endeavored to have the lessees agree upon some uniform plan for the front of their buildings, with the idea of adding to the dignity and appearance of the waterfront.

Plans for the first concrete piers ever constructed in this country, after a hard fight on the part of the Harbor Board, were approved and construction started in April, 1908.

Temporary piers, known as No. 7 and No. 8, were constructed to relieve the congestion caused by the building of the other piers.

The 18-foot channel in the upper harbor was widened and deepened to twenty-four feet and the 24-foot channel widened and deepened to thirty feet.

Recommendation made for nine additional piers, to extend from Jones Falls to Canton.

Prepared plan and estimate for the opening of Pratt street in a straight line, from Concord street to Central avenue.

Recommended a new six million ($6,000,000) dollar loan for the aforesaid improvements.

Recommended that Pratt street be widened, from Concord street to President street, and that the old truss bridge be replaced with a concrete arch bridge, to the full width of Pratt street as widened. Recommendation approved and work completed.

Recommend new ten million ($10,000,000) dollar loan.

Advanced arguments and worked for the municipal ownership of docks along the waterfront.

Recommended further extension of dock system.

Prepared plans, profile and specifications for the construction of a street around the harbor on the south side, including piers, ferry slip, public belt, etc., and acquired the property for the first section.

Prepared plans and specifications for the construction of a Commercial and Recreation Pier at the foot of Broadway; acquired the property; the work to be completed in March, 1914.

Recommended that the harbor masters be placed under the jurisdiction of the Harbor Board.

Arranged traffic regulations for the harbor.

Compiled new harbor laws.

Recommended that the fireboats, iceboats, etc., be stationed at Pier 7.

Recommended that the Marine Hospital bulkhead be constructed, filled in and land reclaimed.

Opposed the dredging of the upper harbor to a depth of thirty feet, and recommended that the money be spent for the deepening of the lower harbor.

Recommended a fifty million ($50,000,000) dollar loan for general improvements of the harbor.

Recommended a one million ($1,000,000) dollar loan, and in reference to loans the work of the Harbor Board did not end with the recommendation, but included all plans, estimates, etc., for the improvements under the loan. The necessity of securing the legislative authority required that this Board impress upon the legislators the importance of such a loan and later required that the people be advised for what purpose the money was to be used.

Plans and estimates were prepared for an elevated road over the Falls, leading to the waterfront.

Plans were prepared for a belt line around the harbor and the construction of such a belt line recommended.

Interstate canals were favored by the Harbor Board, also canals through the city.

Suggestion offered that the city retain all waterfront rights at the Old Marine Hospital.

Tentative plans and recommendations made for new Light Street Bridge.

Arguments made against railroad monoply of piers.

Recommended wider and deeper channels, including plans and estimate.

Important recommendations made as to collections of wharfage on lumber and recommendations again made that the harbor masters be turned over to the Harbor Board.

Harbor laws compiled and published October, 1913.

Studies made for the improvement of the south side upper harbor, west side—Middle Branch, inner harbor of Spring Gardens, Marine Hospital property, and others, all of which required time, thought and study.

In addition to the aforesaid, hydrographic surveys were made and the construction of all harbor work after plans were prepared, supervised by this Department, together with the maintenance and operation of the vessels of the Department and all public wharves, docks, channels and Light Street Bridge.

As I have previously stated, if the city will give this Board the authority to outline some definite fixed policy, and after due consideration, if such a policy is approved by the administration, if the administration will finance such improvements that this Department might recommend, then I say that this Board will be in a position to carry out the developments of this port in a manner to meet the needs of the shipping interests of the present and to amply provide for those of the future in a manner, I do not hesitate to say, superior to that of any other board or special commission that may at this time be appointed, whether it be under State or city control. In making this statement, I mean to imply that this Department has given a thorough study to the needs of this port since they have been employed for that purpose, and in consequence of such must be in closer touch with the requirements of the port than would be a commission who had to devote a great deal of their time in order to accumulate the knowledge that this Board by its work of years have acquired.

A special commission, unless it were a well-paid commission, employed to devote its entire time to port matters, would accomplish little or nothing. To get the right kind of men, they would have to be paid a good salary to compensate them for their work, which again would be an unnecessary burden on the State or city.

What this Board needs is a larger appropriation for research work. We need, primarily, a traffic expert, and possibly, some arrangement could be made with the Chamber of Commerce, whereby we could pay to the Chamber of Commerce a fixed sum annually, they in turn, to let us have the services, from time to time, of their traffic manager, who, because of his long connection with transportation matters and the interest the Chamber has in port matters, would likely be able to serve without conflict of duties.

If a public belt line is to be considered, which has been recommended by this Board for a number of years, then we should have the power to appoint a railroad expert, and no doubt an arrangement could likewise be had with the Chamber of Commerce, or some of the commercial or trade organizations, to secure the services of someone in their employment who knows the local conditions and has had the necessary experience to familiarize him with the needs of the city and the organization of a public belt railroad.

As to the question of whether or not the members of the Harbor Board should receive compensation for their work, after a thorough consideration and discussing this matter fully with some of the best authorities on port administration in the country, I have come to the conclusion that the city can get better results from an unpaid board, other than the President and Chief Engineer, who devotes all his time to the work of the Department.

In the first place, it would be a hard matter to get men well qualified for the position who would be willing to give up their entire time to the affairs of the Department, unless they were well paid. This would have the effect of decreasing the number of the members of the Board, which, in my opinion, is poor policy, as there would be less publicity given to the affairs of the Department, which should be generally known, commented on and open to the general public for their consideration, discussion and criticism. Further, if the pay was small, there would be a wild scramble among an undesirable class who are in no way qualified for the work.

If unpaid, as is the present custom, and giving such time as may be required by the President of the Board, and as their duties might demand, the position is one not sought, but is a distinct honor conferred on the members by the Mayor and one that is and should be filled by widely known and highly respected business men.

Going back to the question of State control, there are some of the leading ports of this country under State control, including New Orleans, San Francisco and Boston. The fact of their being under State control was not necessarily the desire of the respective municipalities, but was due primarily to the fact that the State, realizing its great asset, did not turn over the control of its waterfront to the city.

I know of no instance where a city originally having control of its waterfront has turned it over to the State.

New Orleans is under State control for the reason that the State of Louisiana, for its own protection, builds and maintains the levees to prevent the flooding of the State during the freshet of the Mississippi River.

The waters bordering on the city of San Francisco were always under State control.

Boston, like Baltimore, some years ago owned none of its waterfront and owns but a little today, and in placing the harbor improvements under a State Board, the State of Massachusetts is following out the same plan it has adopted in reference to its parking system, sewerage system, etc., they all being under control of the Commonwealth of Massachusetts.

PUBLIC BELT LINE.

There is nothing more essential to the welfare of a port than cheap switching charges and an interchanging of freight. This can best be brought about by a public belt railroad connecting with all trunk lines entering the city and by means of spur lines with the commercial and industrial houses in the business section.

Money is scarce and the railroads cannot afford to spend large sums at this time to improve their terminals. If a new transatlantic line desired to make Baltimore a port of call, there would be no place for their steamers to dock, as unquestionably their docking at the present terminals would interfere materially with the regular liners now using the railroad piers.

If the City of Baltimore constructed a pier suitable to the needs of the larger vessels, how would the city possibly hope to receive any direct revenue for its use in face of the fact that the railroad companies make no charge for the use of their terminals, their profits coming out of the freight handled. If the city charged the steamship company for the use of the pier it can readily be seen that they would have to operate under a heavy handicap and would not be open to fair competition.

With a public belt, in addition to the flat rate charge, an additional charge could be added for each car loaded or unloaded on a public pier, this extra charge to be absorbed by the railroad company delivering or receiving the car, which would be in the nature of a wharfage or dockage charge for the use of the city's terminal by the railroad companies. In this way, the city would derive a revenue and the railroad companies would not have to make a large layout of money, which at this time they cannot afford to do, and Baltimore is suffering the consequences.

The question of a public belt for Baltimore is not a difficult one to solve with a little co-operation on the part of the railroads.

The railroad tracks now in the bed of the public streets could be incorporated in the belt line and a reduction in the flat rate made to the railroads in proportion to the number of feet of track taken over for belt line purposes; an estimate of the cost of trackage to be first made and after the reduction in the flat rate charge equals the original estimated cost, the track to become the property of the public belt and the refund to cease.

The present switching charges in Baltimore are from four to eleven cents per hundred pounds, or on a sixty thousand (60,000) pound car a minimum of twenty-four ($24) dollars and maximum of sixty-six ($66) dollars.

In New Orleans the flat Public Belt rate is two ($2) dollars per car and in San Francisco two and one-half ($2.50) dollars per car.

Until the public belt, if built, has paid off its indebtedness, a larger rate should be charged and when on a self-supporting basis the rate reduced to produce an amount sufficient to pay the operating and maintenance charges.

The object of the public belt should be to serve the public at the lowest possible cost, and not as a money making investment for the city.

NEW WORK.

Light Street Bridge.

Among the new improvements suggested by this Department is the Light Street Bridge.

Three distinct studies have been under consideration, but until the necessary funds are appropriated to cover the cost of borings, plans, etc., nothing further can be done. Each study is separate and distinct, and each is dependent on conditions not common, one to the other.

It would be a grave mistake to arbitrarily select a location for a bridge, the construction of which will cost from three hundred thousand ($300,000) dollars to three million ($3,000,000) dollars, not knowing the character of bottom, having no idea of the money available, proposed neighboring improvements, width of roadbed, rail lines, etc. Improvements of this kind cannot be planned over night, but require time and thought.

There are many questions of vital importance, each one of which deserves the most careful study, and should be open to free discussion by the public to get the best results.

The question of location depends largely on the channels, foundations, approaches, etc., and whether it is wiser to construct a bridge at a height to permit the free passage of tugs and their tows without opening the draw, or whether it be at an elevation requiring the constant opening and closing of the draw, thereby delaying vehicular traffic in this day of rapid transit.

If Spring Gardens is to be improved, as recommended, then the direction of the main channel should be changed, and Ferry Bar cut away; this will be a big factor in selecting a proper location for the bridge.

Again, the location will depend somewhat on the new proposed waterfront street and the proposed development of the Patapsco River from the present bridge to Elkridge Landing.

Each one of these improvements should be given consideration and authorized or eliminated before the site of the bridge is determined.

Spring Gardens.

Two or three plans for improving Spring Gardens have been worked up by this Department.

One was prepared at the time of the Grade Crossing Ordinance of the Baltimore and Ohio Railroad and eliminated the additional draw span across the channel by paralleling the present bridge of the Western Maryland Railroad and substituting a four-rail two-leaf bascule for the present swing draw. This plan was disapproved.

I have recently completed another study which does away with the Western Maryland Railroad trestle and the proposed trestle of the Baltimore and Ohio Railroad.

This study carries with it a tentative plan for all of the waterfront lying between Ferry Bar and the foot of Howard street, and is intended, as its title would imply, as a study only. None of the details, such as the overhead crossings, etc., have been accurately worked out, but it does show the possibilities of this part of our harbor.

North from the Western Maryland Draw-Bridge.

The improvement provides for a slip 2,700 feet long north from the draw-bridge of the Western Maryland Railroad to the head of Spring Gardens. At the draw the slip is 600 feet wide, and at the north end 400 feet wide. The plan shows that a vessel 530 feet in length and 55 feet beam, together with a tugboat and a lighter alongside, would have free passage in and out the slip while the bulkhead on either side was occupied by a vessel 530 feet in length and 55 feet beam with a lighter alongside.

By purchasing the riparian rights along this waterfront and constructing bulkheads on the line as shown in plan, and filling behind the bulkhead to the present shore line, the city can reclaim 5,572,000 square feet of land, or 128 acres.

The land thus made is most admirably located for industrial improvements, which the city could dispose of at a low price, and at the same time retain possession of all riparian rights.

Railroad Bridges.

The adoption of some such scheme, as shown, would provide a right of way for the tracks of the Western Maryland Railroad, which would make possible the removal of the draw span, which is a great menace to any waterfront development of that part of the harbor north of the bridge.

A recent grade-crossing ordinance gives to the Baltimore and Ohio Railroad the right to construct another trestle north of the present trestle of the Western Maryland Railroad across Spring Gardens. The construction of such a trestle would destroy for all time the usefulness of this part of our harbor for water transportation. By rearranging the proposed lines of the Baltimore and Ohio Railroad they could be carried around the proposed slip and thereby avoid the construction of another draw.

Overhead Crossings.

A crossing over the new proposed lines of the Western Maryland Railroad and the Baltimore and Ohio Railroad could be made from Leadenhall street with an extension east to Fort avenue on the east side of the slip. Likewise, a street could be carried over the tracks from the west side of the slip to Warner and Wooster streets.

Street Reservation.

A reservation of 152 feet parallel to the bulkheads on either side would give a width sufficient to allow the construction of sheds, or buildings, 60 feet wide, with a street on the water side 50 feet in width and on the other side of buildings 42 feet in width. The waterfront street to be provided with a track for a traveling crane located close to the bulkhead, and a track of the municipal belt line to be run on either side of the buildings. Back of the curb line would be the main line of the belt road.

The West and South Shore of Spring Gardens, from the Western Maryland Trestle to a Point West of Ferry Bar.

It is proposed to change the course of Gwynn's Falls and to extend a bulkhead for a distance of 2,000 feet from the Western Maryland Bridge, back of which provision is made for a public street 100 feet wide. From the end of this bulkhead provision has been made for the construction of six piers of an average length of 600 feet, and at the head of piers in the continuation of the public street 100 feet in width to the new proposed Light Street Bridge; this street to carry the tracks of a municipal belt line.

The topography of the waterfront is such that to extend piers out from the present shore line would necessitate the cutting away of the hill, in order to bring it to a grade desirable for development, and at the same time accessible to the piers. The plan, as here shown, would make possible the reclaiming of 4,032,000 square feet of land, or 93 acres.

North Side of Spring Gardens, from Ferry Bar to the Western Maryland Bridge.

The plan here shows six piers of an average length of 700 feet, with ample width of docks and a marginal street carrying the tracks of a municipal belt line.

I feel the construction of piers in this space more desirable than the continuation of the bulkhead, as the harbor at this point is wide enough to permit all vessels to use the piers and the linear feet of dockage space is very materially increased.

Main Channel.

The present channel is 200 feet wide and 24 feet deep. The plan provides for the dredging of all other water lying between the pierhead and bulkhead lines to the same depth as the main channel. From the proposed Light Street Bridge, easterly, the direction of the main channel will be changed, as shown by dotted lines, cutting off the end of Ferry Bar, as the present channel, by way of the Light Street Bridge, turns abruptly and almost at right angles, making Spring Gardens inaccessible to vessels of any length or draft. That end of Ferry Bar occupied by the small yacht clubs to be improved and made a public park.

GENERALLY.

A development, similar to the one presented, would provide for the industrial growth of our city for many years.

There could be no objection to the operation of the lines of the municipal belt in this section. The location is central, being almost in the heart of the town, and the present developments so few that the cost of the riparian rights would be very small, in comparison with the riparian rights in any other part of our harbor.

The bottom is of such a character that the cost of the construction of piers and bulkheads will be somewhat in excess of the cost of those constructed by the city in the upper harbor. If the material dredged is to be pumped back of the bulkheads a large factor of safety must be allowed in the design of any bulkhead work to hold a fill of this character, as the pressure against the sheet piling is very great and there is little opportunity of tying it back in a permanent and substantial manner.

Assuming that the city undertook to construct that part of the improvement lying between the Western Maryland Bridge and Howard street, as above stated, the land reclaimed would amount to 5,572,000 square feet, which if sold at 50 cents per square foot, would equal $2,786,000. Figuring the cost of bulkhead work at $120 per linear foot (the cost of our last bulkhead work of concrete design, not including dredging, being $65 per linear foot), the cost of bulkhead will equal $648,000, the cost of dredging $638,000, or a total of $1,286,000, leaving $1,500,000 to pay for the riparian rights.

I realize quite fully that there is no possibility of starting work of this magnitude at the present time, but would respectfully recommend that such steps be taken, as are deemed advisable, to secure the authority of the United States Government to extend the pierhead lines as shown in the proposed plan, and also such other steps as may be necessary to acquire all riparian rights involved in this proposed improvement as an entirety.

PATAPSCO RIVER.

The Patapsco River can be made navigable from Light Street Bridge to Elkridge Landing at a nominal cost.

This is entirely a State proposition, in which the City of Baltimore should naturally be very much interested.

I feel that the making of the Patapsco River navigable, as suggested, is of very much more importance to the city and the State than the deepening and widening of the Chesapeake and Delaware Canal, and of any contemplated improvements in the Susquehanna River, in view of the fact that it is closer to home.

It is possible that Federal aid could be secured, and I would recommend that a bill be introduced in Congress, authorizing a survey, which in itself would be of great assistance to the State and city in determining the advisability of making such an improvement.

Respectfully submitted,

OSCAR F. LACKEY,
Harbor Engineer.

DEPARTMENT OF PUBLIC SAFETY

Annual Report

Sub-Department of Health

HEALTH DEPARTMENT
CITY OF BALTIMORE
1797
BALTIMORE

To the Mayor and City Council of Baltimore *for the*
Fiscal Year Ended December 31, 1913

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER

1914

OFFICERS AND EMPLOYEES

OF THE

DEPARTMENT OF PUBLIC SAFETY

SUB-DEPARTMENT OF HEALTH

1913

James Bosley, M. D. (5 days)	Commissioner of Health
Nathan R. Gorter, M. D. (11 mos., 17 days)	Commissioner of Health
C. Hampson Jones, M. B., C. M. (Edin.), M. D.	Asst. Comm. of Health
Oscar L. Long, M. D.	Health Warden
H .E. Laroque, M. D.	Health Warden
Augustine Palmisano, M. D.	Health Warden
H. K. Gorsuch, M. D.	Health Warden
J. E. Heard, M. D.	Health Warden
J. T. Spicknall, M. D.	Health Warden
A. L. Retalliata, M. D.	Health Warden
J. W. France, M. D.	Health Warden
C. T. Buckner, M. D.	Health Warden
Bernard Wess, M. D.	Health Warden
C. E. Downes, M. D.	Health Warden
E. A. Munoz, M. D.	Health Warden
H. H. Von Dreele, M. D.	Health Warden
E. K. Ballard, M. D.	Health Warden
C. Frank Jones, M. D.	Health Warden
G. A. Thiede, M. D.	Health Warden
George W. Hemmeter, M. D.	Health Warden
Fred H. Vinup, M. D.	Health Warden
J. Harry Ullrich, M. D.	Health Warden
William A. Knell, M. D.	Health Warden
A. E. Muse, M. D.	Health Warden
J. E. Poulton, M. D.	Health Warden
C. P. Erken-Brack, M. D.	Health Warden
Charles B. Whetle, M. D.	Health Warden
M. Harry Laib	Secretary
Charles Busick	Clerk to Bureau of Vital Statistics
Howard A. Moore	Statistician
Harry C. Andrews	Permit Clerk
Robert R. Krauter	Permit Clerk
C. Victor Dennis	Clerk to Asst. Commissioner
George C. Wedderburn	Registrar's Clerk
Thomas Burgess	Complaint Clerk
Maurice W. Joint (11 months)	Index Clerk
James J. O'Meara (27 days)	Index Clerk

N. G. Keirle, M. D.	Medical Examiner
H. G. Branham, M. D.	Asst. Medical Examiner
W. P. Stubbs, M. D.	Throat Inspector
B. P. Herzog, M. D.	Throat Inspector
Wm. Royal Stokes, M. D.	Bacteriologist
F. W. Hachtel, M. D.	Asst. Bacteriologist
Wm. J. Schmitz, M. D.	Asst. Bacteriologist
Raymond Freas, A. B.	Asst. Bacteriologist
Fred Berger	Asst. Bacterologist (water work)
Harry C. Campbell	Clerk to Bacteriological Laboratory
Edward F. Kelly	Collector for Bacterological Laboratory
G. Harry Rush	Bacteriological Laboratory Assistant
George Considine (15 days)	Laboratory Assistant
Albert League (8 months, 15 days)	Laboratory Diener
John Thomas (1 month, 7½ days)	Laboratory Diener
Harry J. Maloney	Laboratory Diener
Lee Clarke (1 month)	Laboratory Diener
Wm. C. McCormick	Laboratory Diener
Fred C. Blanck, A. B., Ph. D.	Chemist
C. Clifton Howes	Asst. Chemist
Harry B. Siegmund	Asst. Chemist
R. S. Craig, B. S.	Asst. Chemist
Charles McLaughlin	Chemical Laboratory Assistant
George Considine (1 month)	Chemical Laboratory Assistant
W. F. Harrison (3 months)	Chemical Laboratory Assistant
Eugene D. Thomas	Chemical Laboratory Assistant
Michael Gahan	Chemical Laboratory Clerk
H. L. Carman	Stenographer and Clerk
Wm. P. Palmer	Chief Food Inspector
Harry P. Carey, D. V. S.	Dairy Farm Inspector
Robert H. Wempe	Dairy Farm Inspector
John S. Fulton, Jr., A. B.	Dairy Farm Inspector
George Belzner	Food Inspector
Phillip T. Meagher	Food Inspector
Charles R. Roehner	Food Inspector
B. Kerns	Food Inspector
Joseph Sapp	Food Inspector
John Miller	Food Inspector
George J. Fischer	Food Inspector
George H. Lentz	Food Inspector
Michael J. Buckley (2 months)	Food Inspector
Carter Hall (10 months)	Food Inspector
John Behr	Food Inspector
George A. Brady	Food Inspector
E. B. Christopher	Food Inspector
Rudolph Weber	Inspector of Bakeries

George F. Schultz	Inspector of Cow Stables
Bertha M. Muller	Stenographer
Ola Tracey	Telephone Operator
Daniel W. Smith, M. D.	Chief Tenement House Inspector
John A. Kelly	Tenement House Inspector
Abraham Lasch	Tenement House Inspector
C. I. Putts, Jr.	Chief Plumbing Inspector
Wm. Odenhal (6 months)	Asst. Plumbing Inspector
John A. Truelove (6 months)	Asst. Plumbing Inspector
John J. Gessler	Asst. Plumbing Inspector
Thomas L. Sullivan	Asst. Plumbing Inspector
Henry H. Smith	Asst. Plumbing Inspector
Robert A. Reed	Asst. Plumbing Inspector
William E. Dorsey	Asst. Plumbing Inspector
Michael J. Gorman	Asst. Plumbing Inspector
William C. Frostburg (15 days)	Asst. Plumbing Inspector
Edward F. Forster	Asst. Plumbing Inspector
Eugene R. Pruitt	Asst. Plumbing Inspector
Joseph I. Curran	Asst. Plumbing Inspector
J. O. Griffith	Asst. Plumbing Inspector
William J. Kneise	Asst. Plumbing Inspector
William J. Martin	Asst. Plumbing Inspector
Charles F. Hagan	Asst. Plumbing Inspector
Francis A. Ebberts	Asst. Plumbing Inspector
Lawrence C. Rosendale	Inspector of Drains
Frank B. Wood	Chief Clerk to Plumbing Division
Charles H. P. Coe	Clerk to Plumbing Division
G. W. Snyder	Clerk to Plumbing Division
Edward Hopkins	Clerk to Plumbing Division
Robert T. Paterson	Clerk to Plumbing Division
James E. Farrell (10 months, 23 days)	Clerk to Plumbing Division
Edward Thompson	Nuisance Clerk
William E. Woodall	Superintendent of Fumigation
August Ritmiller	Superintendent and Engineer of Morgue
George W. Phillips	Fumigator
Joseph Fitzsimmons	Fumigator
Meyer Raitzyk	Fumigator
William M. Stanton	Fumigator
H. G. Seidell (10 months)	Fumigator
Frank H. Seidell (2 months)	Fumigator
Carroll McDermott	Chauffeur
Thomas Gratton	Driver of Funeral Wagon
William H. Bucheimer	Driver of Funeral Wagon
Thomas Morse	Driver of Disinfecting Wagon
Thomas Reynolds	Driver of Disinfecting Wagon
H. Warren Buckler, M. D.	Medical Examiner of Schools

I. R. Page, M. D. (10 months)	Medical Examiner of Schools
A. L. Fehsenfeld, M. D. (2 months)	Medical Examiner of Schools
Henry Kolb, M. D.	Medical Examiner of Schools
A. K. Bond, M. D.	Medical Examiner of Schools
R. A. Urquhart, M. D.	Medical Examiner of Schools
Virginia B. Lorentz	School Nurse
Marie A. Gorter	School Nurse
Sally L. Jean (10 months)	School Nurse
Olivia C. Dawson (2 months)	School Nurse
Henrietta E. Knorr	School Nurse
Agnes P. Kloman	School Nurse
Lucy I. Cowell	Statistical Clerk
Ellen N. LaMotte (5½ months)	Chief Tuberculosis Nurse
Eleanor Jones (6½ months)	Acting Chief Tuberculosis Nurse
Elizabeth C. Lee	Tuberculosis Nurse
Mary L. Kelly	Tuberculosis Nurse
Lillian Oeligrath	Tuberculosis Nurse
Jennie B. Newman	Tuberculosis Nurse
Margaret Kennedy	Tuberculosis Nurse
Mary Raab	Tuberculosis Nurse
George A. Hutton (1½ months)	Tuberculosis Nurse
Sarah W. Crowsley (3 months)	Tuberculosis Nurse
Eleanor Jones (2 months)	Tuberculosis Nurse
Rebecca M. Coale (5½ months)	Tuberculosis Nurse
Ida L. Lilly	Tuberculosis Nurse
B. M. Stauffer	Tuberculosis Nurse
L. M. Schroeder	Tuberculosis Nurse
Johanna W. Tuve	Tuberculosis Nurse
Ellen M. Hellier	Tuberculosis Nurse
Frances W. Sprecher	Tuberculosis Nurse
Clifford Geffchen (10 months)	Tuberculosis Nurse
Luli Carter (2 months)	Tuberculosis Nurse
Olivia C. Dawson (2 months)	Playground Nurse
Virginia B. Lorentz (2 months)	Playground Nurse
W. D. Olmsted, M. D. (30 days)	Extra Vaccine Physician
Charles P. Clautice, M. D. (30 days)	Extra Vaccine Physician
William F. Skillman, M. D. (30 days)	Extra Vaccine Physician
T. J. Powers, M. D. (29 days)	Extra Vaccine Physician
F. O. Barrett, M. D. (30 days)	Extra Vaccine Physician
G. F. Hartzell, M. D. (30 days)	Extra Vaccine Physician
Frank J. Doyle, M. D. (26 days)	Extra Vaccine Physician
H. E. Wooden, M. D. (24 days)	Extra Vaccine Physician
Benjamin J. McCleary (30 days)	Extra Vaccine Physician
J. A. Insley, M. D. (30 days)	Extra Vaccine Physician
Henry H. Weinberger, M. D. (30 days)	Extra Vaccine Physician
Joseph L. Valentine, M. D. (30 days)	Extra Vaccine Physician

John Wade, M. D. (30 days)	Extra Vaccine Physician
John Girdwood, M. D. (30 days)	Extra Vaccine Physician
L. J. Turlington, M. D. (30 days)	Extra Vaccine Physician
John L. Schweinberg, M. D. (9 days)	Extra Vaccine Physician
Henry E. Lee, M. D. (30 days)	Extra Vaccine Physician
Frank J. Sebald, M. D. (30 days)	Extra Vaccine Physician
Maurice Chideckel, M. D. (30 days)	Extra Vaccine Physician
John J. Morrissey, M. D. (30 days)	Extra Vaccine Physician
Henry C. Hauck, M. D. (29 days)	Extra Vaccine Physician
Edward E. Altvater, M. D. (30 days)	Extra Vaccine Physician
L. L. Lloyd, M. D. (30 days)	Extra Vaccine Physician
John W. Linthicum, M. D. (28 days)	Extra Vaccine Physician
Thomas A. Stevens, M. D. (23 days)	Extra Vaccine Physician
H. Young Westbrook, M. D. (1 day)	Extra Vaccine Physician
H. A. O'Neill, M. D. (2 days)	Extra Vaccine Physician

QUARANTINE STATION

Thomas L. Richardson, M. D.	Quarantine Officer
A. D. Driscoll, M. D. (9½ months)	Asst. Quarantine Officer
Edward G. Altvater, M. D. (1 mo., 19 days)	Asst. Quarantine Officer
James C. Evans	Captain No. 1
Wm. T. Green (10 months)	Captain No. 2
David Wood (1 month, 25 days)	Captain No. 2
John Kellner	Engineer No. 1
Bernard E. Eckert	Engineer No. 2
John L. Smith	Fireman No. 1
Patrick McCauley	Fireman No. 2
Bernard McMahon	Deckhand No. 1
Alonzo Evans	Deckhand No. 2
George M. Streeper	Messenger
John L. Matthu	Gardener
M. T. Armacost	Nurse
T. W. Merchant (25 days)	Watchman
Charles H. Kronhardt, Jr. (9½ months)	Watchman
Lula Martin (5½ months)	Cook
Laura Dobson (2½ months)	Cook
Clara Mason (1 month)	Cook
Adeline Snowden (3 months)	Cook
Sarah Cook (10 months)	Laundress
Lula Martin (1½ months)	Laundress
Clara Mason (15 days)	Laundress
Laura Dobson (10½ months)	Extra Nurse
Beulah Barclay (12 days)	Extra Nurse
Anna M. Summers (10 months)	Matron

SYDENHAM HOSPITAL

S. T. Nicholson, Jr., M. D.	Superintendent
J. C. Stansbury, M. D. (4 months, 9 days)	Asst. Physician
John F. Hogan, M. D.	Asst. Physician
Mary J. Putts (9 months)	Superintendent of Nurses
Katie Wesley (½ month)	Superintendent of Nurses
A. E. Hagan (1½ months)	Superintendent of Nurses
Fannie Michael (2½ months)	Superintendent of Nurses
D. Edgar Fay (9 months)	Clerk
Alma Smith (2 months)	Secretary
Venie A. Myer (½ month)	Secretary
Katie Wesley (9½ months)	Supervisor
Lena C. Baker (7 months)	Nurse
May Fuller (2 weeks)	Nurse
Laura Fry (3 months)	Nurse
Harriet Snyder (1 month)	Nurse
Mae Seebold (9 months, 19 days)	Nurse
Carrie Hoffman (9 months, 25 days)	Nurse
May Fuller (1 week)	Nurse
Helen Johanns (3 months)	Nurse
Alice Caron (2 weeks, 10 days)	Nurse
Minnie Smith (2 weeks)	Nurse
Gertrude Lee (3 months, 24 days)	Nurse
Isabel Mulick (2 weeks)	Nurse
Mary Kennedy	Cook
Ella Rockel (7½ months)	Laundress
Anna Hutchins (1½ months)	Laundress
Mrs. Nicoll (3 days)	Laundress
Anna Weinbach (2 months)	Laundress
Sophia Lay (1½ months)	Laundress
Ida Krebs (½ month)	Laundress
Mary Straughn (1½ months)	Maid
Sophia Beyer	Maid
Margaret Lawrence (10 months, 14 days)	Maid
Mary O'Brien	Maid
Edward Meehan (2 weeks)	Orderly
Thomas Hutson (7½ months)	Orderly
George Trice (4½ months)	Orderly
George Trice (2 weeks)	Laborer
John Burns (7½ months)	Chauffeur
Thomas Hutson (4½ months)	Chauffeur
Joseph P. Butler (7½ months)	Messenger
Edward Murphy (1 month, 1 week)	Messenger
Edward Meehan (2 months, 19 days)	Messenger
Edward Vogler	Utility Man
Alice Caron (1 week)	Special Nurse
George Trice (4 months, 17 days)	Special Guard

BALTIMORE, July 21, 1914.

To His Honor, the Mayor, and Members of the City Council:

I have the honor and pleasure to submit the annual report of the Sub-Department of Health for the year 1913.

In it you will find a full statement of the work done by the several divisions, which I consider very instructive and creditable, and from which may be obtained suggestions for further improvement, to which, from time to time, I shall call your special attention in the future.

Yours respectfully,

NATHAN R. GORTER, M. D.,
Commissioner of Health.

ANNUAL REPORT

OF THE

ASSISTANT COMMISSIONER OF HEALTH

Report of the Assistant Commissioner of Health.

BALTIMORE, July 1, 1914.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

I hereby submit to you the report of the work of the Sub-Department of Health for the year 1913.

It has been constructed along the lines laid down in the report for the year 1912, with the addition of a few tables prepared by Miss Cowell showing deaths from certain diseases that occurred in former years. These tables were added to the report for this year just as similar tables were added to the report for the year 1912, merely for the purpose of having records which might be used in future work, and, therefore, have nothing to do with the year 1913. We have prepared a number of tables and diagrams which were used by the Bureau of Municipal Research in its display given by the Bureau at the City Club rooms in the autumn of 1913. Many of these have been included in the reports of the Bacteriological Laboratory, Chemical Laboratory and Tuberculosis Division, but there are also others showing the total death rate (white and colored population combined and separated) from 1875 to 1912 inclusive; reported birth rate; the death rate of children under one year of age; the death rate due to tuberculosis, typhoid fever, cancer, scarlet fever, diphtheria, etc., which have not been included because it was not deemed desirable to present them at this time, owing to the fact that we have not had the time to devote to such productions required to present them in proper condition and with sufficient explanation.

The reports of the medical examiners of public and parochial schools and their assistants, the nurses, are in the usual forms and again show that which has been pointed out in former reports: the great need of additional nurses to make fully effective our present force of examiners. The nurse is the one that does the "follow-up" work, without which the medical examination of schools would be almost worthless, and therefore the increase of nurses would greatly enlarge and better the results now obtained.

We also again call attention to the desirability of systematizing and correlating the work in the different groups of schools so that we could accomplish the constructive work with permanent results and perhaps also bring it into the intensive vital statistics study of the sanitary districts of the city. This only can be done by having some properly equipped person appointed whose work would be confined strictly to this subject. Much good is being accomplished even with our present force, but it is quite evident that the amount of good varies greatly in the different schools, which seems to be due chiefly to the want of appreciation on the part of parents and guardians of the great importance to the children of having defects promptly and thoroughly corrected, and of the want of facilities to get the defects attended to by physicians. This difficulty can be greatly overcome by increasing the amount of time the nurse can devote to each child (by increasing the force of nurses) and by providing clinics of sufficient number and good character to attend to the children.

It appears that no clinic is needed more than a dental clinic. A careful perusal of the tabulated report will show that the attention to the teeth varies a great deal in different sections of the city and in different schools in the same section. This variation arises from at least two causes:

First—The difference in the character of parents and guardians.

Second—The facilities for having the teeth attended to.

The first cause is one that can be overcome by the expenditure of much time and patience in efforts to convince careless parents of the value of mouth hygiene. This is being done to the extent of the powers of the present force of nurses, but we are convinced that many parents neglect the mouths of their children because of the want of "clinics" rather than to indifference to the condition of the teeth. Some have contended that free clinics are already provided by dental schools and do good work for all who apply. This is true, but the number is not more than three and even though they were equipped to attend to all possible candidates for treatment, there would yet remain the great difficulty of sending young children to distant points from home. Everyone is aware that for free medical care of the sick, citizens' dispensaries (besides those conducted by medical schools) have been established and maintained in many places, but we do not recall seeing in such places a well-equipped dental clinic, or indeed one of any kind. Dr. B. Holly Smith, chairman of the Oral Hygiene Council of Maryland, has furnished a summary of the work done in the year 1913, at dental clinics supported by their association, a copy of which is as follows:

> At the Parental School, of which Mr. Read is the principal, the mouths of forty (40) pupils were put in perfect condition during the past year.
>
> At School No. 9, corner of Greene and Fayette streets, during the past scholastic year there were 186 cases examined, 76 cases completed, 79 cases in which only most necessary work was done, 16 cases sent to city dentists, 12 cases refused to have work completed, and two cases left school; total, 201 treatments. One hundred and fifty-four amalgam fillings introduced, 39 cement fillings introduced, 28 gutta-percha fillings introduced, 92 temporary teeth extracted, 20 permanent teeth extracted, and 73 cases had teeth cleaned and polished.

The above shows that there is an acceptance on the part of some parents of such meagre facilities, and any person familiar with the work must know that increased facilities will greatly increase the good results. We think that it is too often in the minds of the people that such clinics are associated with decayed teeth only. Such a limitation is not or should not be to such a field, but should include many pathological conditions of the mouth and the pharynx, which are believed to be the cause in many cases of backwardness in studies.

It is not necessary for me to use time and space to call your attention to the report made by heads of divisions that have already demonstrated their value. There are many suggestions made by them and ideas for improvement in our work may be deducted from them. It is perhaps wiser from every viewpoint to submit such things that are involved in a plan of reorganization which has for its object efficiency and economy to repeated conferences of experienced health officers, rather than have set forth here the view of any one officer.

Yours respectfully,

C. HAMPSON JONES, M. D.,
Assistant Commissioner of Health.

ANNUAL REPORTS

OF THE

Medical Examiners and Nurses of the Public Schools

Report of Dr. H. Warren Buckler.

BALTIMORE, June 11, 1913.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

In accordance with the custom of preceding years, I beg leave to submit my annual report as medical inspector in the public schools of Baltimore, for the school term of October, 1912, to June, 1913.

As you are aware, the duty of the inspector consists in visiting the schools allotted to him and of making an inspection of *all* children in the kindergarten and first four grades. Each child has a card, with the defects required by the Department to be detected, printed thereon, and as the inspector examines the child he marks on the card the existing defects if there be any. Small printed notices are then given to the child announcing the existence of such defects and advising the parent to seek medical aid.

At the end of the first inspection, the inspector again visits the schools and re-inspects all those children found defective at the first visit, and notes whether his advice has been followed or not.

In all, I have visited 18 public schools and seven parochial schools, having inspected 9,943 children.

A glance at the card containing the list of defects to be detected will show you that a number of them are of no significance whatsoever in so far as the health of the child is concerned. In consequence, a vast deal of time is wasted in noting and notifying.

When the work of inspecting the public school children was first begun, this method just outlined proved efficacious enough for the time being. The inspectors were unexperienced; each record made was a new one; the teachers were doubtful of the value of the inspection, and the parents disinclined to co-operate. Now the state of affairs is somewhat different. Each child, with the exception of those entering school for the first time, has been inspected at least eight times, and those whose parents were inclined to heed the advice given, have been treated long ago. The beneficial results of the inspection, therefore, are yearly growing less, and I personally feel that the present system has passed the limit of usefulness.

For the past two years, while carrying out the routine as prescribed by the Department, I have been following special lines of work suggested by study and personal past experience. As I look upon the question today, the work of the medical inspector and school nurse might be classified under three distinct headings:

I. His relation to the community.
II. His relation to the child.
III. His relation to the school.

By the value of the inspection to the community I refer to what a public school medical officer should do towards the control and prevention of all communicable diseases, in so far as the school may be regarded, as the source of infection. In some instances this would be a comparatively simple task, but in epidemics of the various contagious diseases the problem would be a most difficult one. If you consider for a moment the havoc that scarlet fever, measles, diphtheria, chicken-pox and mumps have played in our schools during the past session, you will agree with me that it is a question that merits careful consideration.

How do such diseases get a start in the school? Usually through the attendance of a child or children who are not under the care of a physician. At present the only way your

Department becomes aware of the existence of any contagious disease is through the report of the attending doctor. The principal or teacher is then notified to exclude such cases and all contacts, but a period of at least three days elapses between the time of diagnosis and the time of exclusion of suspects. If the medical inspector was a daily visitor to the schools it would be a simple matter for the various teachers to send to him all suspicious cases, and, from my experience, the teachers are pretty keen in detecting the prodromal evidences of the common contagions.

Parents, even the most careless and ignorant, usually keep their children home if ailing. Any child absent for a consecutive period of three days should be visited by the school nurses, and if found to have a contagious disease, should be excluded, together with other members of the family, and not allowed to return until released by the inspector.

It is not at all an uncommon occurrence to see a child sick for several days with the prodromal symptoms of an eruptive disease, return to school as soon as the symptoms subside, covered with a rash. Nor is it infrequent that parents will return children to school (who have had unreported cases of contagious disease) when their condition does not warrant association with others.

I believe, further, that the classroom is an important factor in the prolongation of epidemics, and any room in which there have been several cases of any contagious disease should be fumigated, and such fumigation repeated if necessary. Daily visits to the schools would necessitate an increased force of inspectors, or else a shifting of such work to the ward physician, but it is a matter of such vital importance that I believe some attempt should be made to put a system of inspection of this kind into effect. This phase of the medical inspection is the only one that deals essentially with the Department of Health, the others being of more interest to the Department of Education.

Under the second heading: "The Relation of the Inspector to the Child," I wish to discuss the association between physical defects and progress in studies. I do not believe that the public school medical officer in his official capacity of examining the school children should take note of any defects other than those that may have a bearing upon the progress of the child in school. Any effort on his part to advise or insist on the correction of other defects is, in my opinion, beyond his jurisdiction, and is responsible for the resentment and lack of co-operation manifested oftentimes by parents and family physician. In my report last year I endeavored to show the relationship between certain physical defects and retardation. I pointed out at that time that defective breathing, defective vision, and defective nutrition were present in a sufficient number of children repeating the grade, or rated as dull by the teachers, to warrant the assumption that they were certainly a contributing cause. This past session I have been able to reinspect many of those children previously rated in the repeater and retarded groups and to note what effect the correction of the defect had upon the child's progress. My conclusions are about the same as those in last year's report, viz.: that defective breathing and defective nutrition may be the cause of backwardness in studies, and that defective vision *is* an important and frequent cause. Let me place before you in tabulated form the relation between repetition and retardation, and defective breathing, defective vision and defective nutrition.

	Session 1911–1912	Session 1912–1913
Number children with defective breathing....	972	917
Number repeating grade....................	288	367
Number retarded in studies................	317	285
Number making normal progress..........	367	265
Number children with defective vision.......	400	454
Number repeating grade....................	206	229
Number retarded in studies................	137	159
Number making normal progress..........	57	66
Number children with defective nutrition....	242	352
Number repeating grade....................	78	150
Number retarded in studies................	94	100
Number making normal progress..........	70	102

In studying the repeaters and retarded children of the session of 1911-1912 with reference to the effect of correction of defects upon such backwardness, let me ask you to review the following table:

Defective Breathing.

	Repeaters, 288.	Retarded, 317.
Treated and progressive............	77, or 26%	47, or 14%
Treated and *not* progressive........	35, or 12%	17, or 5%
Not treated, and progressive........	62, or 21%	24, or 7%
Not treated, and not progressive....	112, or 39%	38, or 12%
Not examined	2	191

Defective Vision.

	Repeaters, 206.	Retarded, 137.
Treated and progressive............	59, or 23%	35, or 25%
Treated and *not* progressive........	15, or 7%	4, or 3%
Not treated and progressive........	17, or 8%	7, or 5%
Not treated and not progressive....	70, or 34%	34, or 25%
Not examined	45	57

Defective Nutrition.

	Repeaters, 78.	Retarded, 94.
Treated and progressive............	28, or 37%	6, or 6%
Treated and *not* progressive........	5, or 6%	....
Not treated and progressive........	5, or 6%	....
Not treated and not progressive....	30, or 39%	13, or 14%
Not examined	10	75

From the above it will be seen that in every instance where treatment was followed out, the percentage of progressives is greater than among those who declined the advice of the inspector, and especially is this true in the cases of defective vision.

A system of inspection along the lines suggested by this study is of tremendous economic importance to the city whose School Board is spending thousands of dollars annually on backward children. It is, however, a question that concerns the Department of Education, rather than the Department of Health.

The relation of the physician to the school was the third division made by me for this report.

The indices of efficiency of any school are the progress of pupils and their attendance. I have already discussed the former. I now want to show of what value the nurse and doctor may be in caring for the sick, absent children. The miserable attendance record in the Baltimore schools is due to an insufficient, incompetent and ignorant group of attendance officers. Theoretically, sickness should be the only justifiable cause of absence. If an officer goes to the house of an absentee and is informed that such absentee is sick, she goes away and returns a report that the child is home on account of personal illness. She is unable to ascertain whether this be the fact or not, on account of a lack of knowledge. A well-trained nurse visiting the absent child would, in the majority of instances, be able to say whether the child was really ill or faking. She could herself relieve trivial ailments and advise what proper medical assistance could be obtained if needed. I instructed my nurse during the past year to visit absentees reported by the attendance officer as home on account of "personal illness." In all she was able, with her other duties, to visit 114 children. Of these only 36 were, in her opinion, sufficiently sick to stay from school. Eighteen were perfectly well and had bluffed the attendance officer. Fifty-eight had some minor ailment, forty-three of whom she treated and returned to school the next day, and the remaining 15 she sent to their physicians or the nearest dispensary. The balance were home for causes other than illness.

The physician can be of value to the school in other ways. The separation of the mentally deficient into small classes is a matter that is engaging our school authorities. Naturally the selection of such cases should be backed by the opinion of the school physician. The same is true in the formation of fresh-air classes for cases of suspected tuberculosis.

There is a great deal still to be done towards improving the sanitation and ventilation of many of the schools to which work the medical inspector should give more time, and over which he should have full jurisdiction. The decision as to whether delicate children should be allowed to progress, is a question that should be referred to the inspector yearly. The over-pushing of ambitious children who have not the physique to stand the strain is the cause of much of the choreas tics and other allied disorders not uncommon in our schools.

I believe I have called your attention to most of the more important features of medical inspection as they present themselves to me. It is for you to decide what shall be the scope of the work in the future.

Respectfully submitted,

H. WARREN BUCKLER.

Report of Dr. I. R. Page.

BALTIMORE, May 26, 1913.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

I beg to inform you that in accordance with instructions received from you September 25, 1912, I have inspected (with the efficient co-operation of Miss M. A. Gorter) the children in the public and parochial schools that have been formerly assigned to Dr. J. H. Iglehart, and after a primary inspection have reinspected all defectives and examined absentees and new children not seen on first visitation.

Complete reports of every school have been furnished the Health Department, giving number of pupils examined, number of ones re-examined, number of defectives cured, improved, "not treated," also conditions of school buildings from a sanitary point of view.

Our experience in school work leads us to believe that what is needed is an increase in the corps of nurses; in order to vitally impress the average mother she must have the voice of the visitant nurse to *instruct* as to the importance of remedying defects, as well as the *visual information* imparted by the notification card of the Health Department.

Owing to the fact that there is relief to be had at dispensaries and hospitals where men of ability and experience do remove the grievous handicap from which the defectives suffer, it is all important to arouse the mothers and remove their indifference and get the children where they can be treated; but "so few visitants," so many mothers! What are these chosen few among such a multitude of mothers? Get us more nurses!

Respectfully submitted,

I. R. PAGE, *Medical Inspector.*

Report of Nurse Miss M. A. Gorter,

Assistant to Dr. I. R. Page.

BALTIMORE, June 11, 1913.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

I respectfully submit my report as school nurse, from October, 1912, to June, 1913.

The routine order of work has been the same as in former years, viz.: mornings spent in assisting medical inspector in inspecting and re-inspecting thirty schools.

My additional work has been to make frequent visits to about twenty of these schools, those needing most attention, inspecting and instructing children in them, treating a number of cases of impetigo, blepharitis, etc., following up to their homes bad cases of mal-nutrition, adenoids, defective vision, etc., visiting some homes as often as six times. When desired by parents unable to take their children to dispensaries, have done so for them; also visited social agencies in co-operation with work. Have taken a number of bad cases of defective vision for treatment, and of adenoids and enlarged tonsils for removal to dispensaries.

Those children who were deaf, dull, anemic, etc., are improved. Many cases of defective vision have been treated during the year. Fifteen poor children have been given glasses and three were helped in obtaining them. Three cases were transferred to the School for the Blind. One boy, who could scarcely see to read, who was considered feeble-minded, and was a nuisance to the teacher, the nurse, after repeated visits to home extending over a period of several years, induced mother to have eyes examined and get glasses. Now the boy reads well, writes beautifully, and gives no trouble in school. There are still many school children handicapped by obvious physical defects, whose parents will not heed advice.

The educational value of the nurses' work is being shown, however, by increased co-operation on the part of parents in sending children to family doctors and dispensaries and by the children themselves in cleanliness, care of teeth, etc.

For the valuable aid and encouragement of the teachers, for courtesy shown and fine work done in the Presbyterian Eye, Ear and Throat and the Baltimore Eye, Ear and Throat Hospitals, to Federated Charities, School for the Blind, Henry Watson Aid Society, attendance officers, tuberculosis nurses, instructing visiting nurses, and to all who have by hearty co-operation added to the efficiency of my work, my sincere thanks are extended.

Respectfully submitted,

MARIE ALIDA GORTER, R. N.,
School Nurse.

Report of Dr. Henry B. Kolb.

BALTIMORE, July 31, 1913.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

I herewith respectfully submit my report of medical inspection of public and parochial schools for the season of 1912-1913.

The public schools examined were Nos. 2, 3, 6, 7, 8, 23, 24, 25, 26, 27, 38, 40, 42, 43, 47, 73, 77, 93, 97, 105 and 108. The parochial schools were St. Leo's, St. Elizabeth's, St. Patrick's, St. Stanislaus', St. Casimir's, St. Bridget's, St. Michael's and Holy Rosary.

The first examination of pupils was as follows: Total number of pupils, 13,958; out of this number we found 4,723 defective, excluded 66, and we also ordered 1,077 vaccinations.

On our second examination we found 1,633 of the defective children had been cured, and 1,378 improved; the remainder being still defective.

The dreaded, miserable condition of pediculosis has been reduced considerably, according to my nurse's statement, and on our second examination we found still greater improvement; due, I am sure, to the untiring efforts of the nurse, Mrs. Knorr. It was noticeable that the children in the parochial schools were cleaner than those in the public schools, only about a dozen out of all we examined suffering from pediculosis. Our reports also show nearly all children are admitted to the parochial schools without being vaccinated, a condition which should be remedied.

In regard to the schools in one district, most of them are old buildings, poorly equipped and badly ventilated. However, particular attention should be called to the following schools:

A group of buildings comprising No. 93 are in wretched condition. The eastern and western annexes and the portable building all have damp walls; moisture oozes through them in wet weather. The rooms are draughty and the light very poor.

No. 40's toilet facilities should be rearranged. At present a number of the closets are placed too near the heating plant and the resulting odor, while perhaps not detrimental to health, is very disagreeable and at times nauseating.

The rooms on the north side of the first floor of No. 73, Aisquith street, near Mullikin, are very badly lighted. It is often necessary that artificial light be used, and even that is insufficient, because the jets are placed high up and no means used to increase the light which the ordinary jet throws.

The same conditions as related of No. 73, are found at No. 43, on High street, near Fayette.

I would like to mention the overcrowded condition of some of the parochial schools, notably St. Stanislaus' and Holy Rosary. This seems to comprise the conditions that need most urgent attention.

I would also call attention to the need of a greater number of nurses, thereby giving the children the attention they really require, and which it is impossible for one nurse to do alone.

Respectfully submitted,

HENRY B. KOLB, M. D.

Report of Nurse Mrs. Henrietta E. Knorr,

Assistant to Dr. Henry B. Kolb.

BALTIMORE, August 22, 1913.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

The enclosed report is of work done in the public schools as Dr. Kolb's assistant. In addition to submitting the figures representing our work, I desire to mention the great improvement noted by the teachers in children who have had adenoids and hypertrophied or diseased tonsils removed. Thirty such were taken by me to dispensaries for operation.

With the assistance of the Hebrew and Federated Charities, seventeen children with defective sight have been supplied with glasses.

One strabismus case was operated upon, and numbers had eyes examined and procured glasses for which parents were able to pay.

The need of an additional nurse in Dr. Kolb's district is great, much of the time devoted to visiting being spent in explaining matters through an interpreter, thereby decreasing the number of cases reached and instructed in a district where each family should be visited. However, a general improvement has been noted from year to year. The principals of schools and the teachers render invaluable aid in this work, and I thank them most heartily.

COMPLETE REPORT OF WORK DONE, OCTOBER TO JUNE, 1912–1913.

Examined with Dr. Kolb	18,296
Examined alone	18,997
Visits to homes	923
Visits to dispensaries	73
Treated at home	11
Treated in school	3
Inspected at home	45
Excluded	70

Respectfully submitted,

HENRIETTA E. KNORR, R. N.

Report of Dr. A. K. Bond.

BALTIMORE, July 31, 1913.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

I herewith submit my report of medical inspection of public schools in Baltimore for the year of 1912-1913, an inspection covering the first four grades, and pupils from the higher grades especially needing examination.

The public schools committed to my care lie in an outer belt extending from Patterson Park on the south to Druid Hill Park on the west, and are attended for the most part by children of well-to-do families; although in each school, without exception, there are larger or smaller groups of children from squalid districts showing evident signs of deficient care and nourishment. Thus, in every school of my district the importance of medical inspection for the protection of the scholars from disease and filth, either carried to the school by the individual pupil or contracted there, is clearly shown.

Of the seven parochial schools inspected by me, some urgently need inspection, while others are so favorably located and so well supervised by those in charge that almost nothing is found requiring criticism. All of the parochial schools, however, show the need of a strict requirement, that all pupils on *admission* shall present proofs of successful vaccination. Those in charge of one or two of the schools have responded to my suggestions upon this point very earnestly and with much success, but it is quite evident that those in charge of certain other schools must be driven to this measure by their spiritual superiors.

All of the schools under my care have been subjected to inspection and to reinspection; my rounds being so arranged as to give early attention to those inspected late in the preceding school year, and to facilitate the work of the school nurse in her afternoon visits for more detailed care of individuals found in the inspections to be defective or brought to our attention at other times by the principals.

I desire to acknowledge the courtesy and co-operation extended to us by the teachers, and also to testify to their vigilance in a matter of great public interest—that during school terms in which an extensive epidemic of eruptive fevers prevailed in the region in which the schools were located, affecting thousands of children, only a single one out of all the pupils inspected showed even a suggestion of such disease.

I regret that occasionally hostility is shown to the work by parents who appear to consider inspection as a personal intrusion by the inspector into their private affairs. This misunderstanding could be cleared up if the process of inspection were (like the presentation of a vaccination certificate) entered among the regulations of the School Board as an essential and unavoidable part of its regular school curriculum. This would eliminate the feeling that it is a sort of sanitary police invasion of the curriculum by the Health Department.

Every evidence is presented, however, that the work is growing in public favor. Principals and teachers welcome the co-operation of inspector and nurse, and pupils show increasing sanitary intelligence.

In my last report I discussed at length the elimination of pediculosis from the public schools. In the worst cases, as I said, the patients are nightly reinfected in their own homes; but I have found in the past year one or two instances of infection, clearly proved, occurring in the classroom itself, the pediculi here crawling from filthy to cleanly children. In one school a number of careful mothers in succession complained that their children had contracted head lice (one of the children being compelled in consequence to lose a week from her studies), and finally the infection was traced to a little neglected girl whose seat was almost in the centre of the group affected. Compulsory education implies an obligation on the part of the city to prevent such infections. My attention has been drawn also by teachers to the probability of infection with pediculi occurring through contiguity of hats and cloaks in the cloakrooms. From these observations and those set forth in my last report, it may be seen that the banishment of pediculosis from the schools cannot possibly be met by school inspection, unless some means be instituted for cleaning up and keeping clean certain badly infected homes; and unless the School Board establish some method of preventing classroom and cloakroom transmission of these noxious insects.

Inspection has resulted during the past terms in operations upon a considerable number of pupils affected with marked enlargement of the tonsils and adenoids, often with decided improvement in health and in power of attention to lessons. The treatment thus given, either by private practitioners or by hospital surgeons, is, however, in many cases very insufficient and unsatisfactory. There is need of corrective after-treatment lasting for months, perhaps, which the little patients do not receive, and the surgical work is in some instances improperly done. In many patients the original inflammatory condition of the naso-pharynx does not clear up after the operation, and at the reinspection there is found still a muco-purulent discharge, with mouth breathing and perversion of voice tones. In other patients the uvula has been cut off and there are other throat injuries suggestive of inexperience or imperfect anaesthesia, with hurried work. A "pupils' hour" on Saturday at certain hospitals, when operators of experience could find leisure for special attention to children referred to them from the schools, would give the best results and save the time of parent and pupil. Moreover, with such a designated hour for these appointments better records could be made of each case, and oversight could be exercised in a medical way until the special aim of inspection—restoration to full health and ability to profit by school instruction—is attained. The "mouth breathing" habit often persists after operation, and should be corrected by prolonged care of the nasal parts, supplemented perhaps by school classes for training in proper respiration and vocalization.

Being required to report on the mental health of certain pupils considered defective, I would here express my deep sympathy with these unfortunates and my hope that the measures already initiated by the School Board for their relief may be early brought to completion. The inspection of the classes of backward children in certain schools is the one sad thing in my yearly rounds. The boys especially have the faces of Ishmaels and Pariahs, of outcasts at war with their surroundings.

No human being in their state of mind could have the best that is in him developed. There are other isolated boys whom I find at nearly every visit sitting, sour and idle, in the anteroom of the principal's office. They sit there because they are "impossible" in the classroom with ordinary pupils, and because there is nowhere else for them to sit. The proper treatment for such brains is *not* idleness nor reproof, but occupation, probably manual, based upon expert study of their intellectual possibilities. Even the incurable and periodically violent inmates of insane asylums have this much granted to them by modern enlightment.

I have endeavored in each such backward case to discover and secure the removal of any evident physical condition which might have to do with their incompetency, but the results of my efforts have not been satisfactory.

There are many cases of mal-nutrition found during inspection. The patients are obviously unfit for work and incapable of giving any proper return for the money expended by the community for their instruction. The problem is not fully met by the notice sent the parents, the visits of the school nurse, or the interest of various benevolent organizations whose attention is drawn by her to the patient. The parents, through ignorance, poverty, indifference, sickness, or largeness of family, are able to do little in the matter. Prolonged oversight by a skilled visitor is needed—one who can stick to the case until school health is again attained. Such care could be given if the often-requested accession to the staff of nurses were in the form of a corps of home nurses, whose business was to follow up in the homes of the pupils the suggestions of the inspector and the school nurse.

To such a home nurse could be referred cases of malnutrition, of obstinate and recurrent pediculosis, and chronic but remediable hindrances to study arising from physical defects; also certain very annoying cases of "evil habits" which have repeatedly been brought to our attention by the teachers as disturbing to school discipline, injurious to school morals, and injurious to health. The correction of this evil is partly medical and partly a matter of oversight and re-educating in the home. My information on the subject is based entirely on appeals which have come from the teaching staff of the schools, as it is evidently a matter which cannot be dealt with at a visit of inspection. It is probably the most difficult problem involving health and school work which we have to face in our cities.

The physical conditions of the school buildings require no unfavorable comment and such sanitary defects in management as have been pointed out to the principals have received attention. The general health of the pupils throughout the schools was excellent.

Respectfully submitted,

A. K. Bond, M. D.,
Medical Inspector.

Report of Nurse Miss Virginia B. Lorentz,

Assistant to Dr. A. K. Bond.

BALTIMORE, July 31, 1913.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

The public schools over which I have the nurse's supervision vary as to the class of children to a large extent. Those located in the eastern section of the city need more attention than of the northeastern. The children of the latter class are generally well clothed, well nourished, teeth well cared for and the parents willing to do anything for their welfare that is within their power. The former section is composed of foreigners, a number of which cannot understand English, and the children act as interpreters. It is, therefore, quite necessary to use the simplest language within the comprehension of the young interpreter. On the whole, we manage to get along. It goes without saying that the homes of these children need more visiting than any other.

Last winter I visited a number of homes and received permission to take the little ones to the dispensary for removal of adenoids and tonsils. Some of the parents are too nervous and frightened to go themselves and are glad to be released of, to them, this most disagreeable duty. When the nurse points out to the parents the injustice to the child of allowing him to grow up hampered with defective eyesight, tonsils, adenoids, otorrhœa and many other distressing ailments which are a real menace to his future development, they will be convinced of the truth and will either set about to have the evil remedied or ask the nurse to do so for her.

St. Joseph's Hospital being more centrally located for me, I took the larger number of my little patients there. The doctors and nurses were most kind and attentive to the children.

There is one school I feel as though I should mention especially, as I have in nearly every visit I have made to the homes of the children attending this school, received the hearty co-operation of the parents. They immediately set about doing what is asked of them. This school is on Lakewood avenue, near Orleans street. While there are a number of foreigners attending, they are of a good class. They live in nice clean homes and the children are well cared for.

One afternoon I went into a classroom to look after some children. The teacher said one of the boys was sick, that she did not know what was the matter. I decided I would find out. Made my visit, found boy suffering with swollen neck and high fever. Went to Hebrew Hospital and asked them to send doctor to see what really was the trouble. Next day followed up the case. Found doctor had been there and left medicine and said if he did not get better in a day or two to let him know. Fortunately he was well in a short time.

There is such a large field to cover that it is not always possible to keep track of the cases as one would like. The "school public" is learning that the nurse is trying to help and takes an interest in the children, and they do not deem us officious as they did formerly.

Having been on the staff for some time, I can well remember when the nurse was treated with positive rudeness when the homes were visited. I think I can say that has not occurred to me once for the past two years. So we feel each year that we are accomplishing more and more.

Very respectfully,

VIRGINIA B. LORENTZ,
Nurse.

Report of Dr. Richard A. Urquhart.

BALTIMORE, July 31, 1913.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

I desire herewith to submit my report as medical inspector in the public schools for the year ending June, 1913.

The nature of the work has changed but little and the results are practically as in previous years.

I do not believe it is practical to accomplish more than is now accomplished, nor to change the system to any appreciable extent with the means appropriated for this purpose.

Familiarity, based upon four years in this work, persuade me that by far the greatest good is to come from the close association of the school nurse with the parents in their homes. This fact has been emphasized in all the yearly reports of the inspectors without as yet any increase in the nursing force.

Backwardness in children may result from feeble-mindedness, from defects of nose or throat or vision, but I am becoming more and more impressed with the idea that mal-nutrition, whether from disease or from poverty, or ignorance or carelessness of ordinary rules of hygiene, is by far the most potent factor.

Through the persuasion of the nurse almost entirely we have been able to have many children relieved of adenoids or diseased tonsils or defective vision and with sufficient nurses to make frequent visits to the homes of the parents very much more could be accomplished in the management of these cases of mal-nutrition from whatever cause.

The medical inspector should be consulted both as to the entrance of children into the public schools and their subsequent advance from grade to grade. No child younger nor much under the average weight for a grade should be allowed to enter such a grade unless a careful physical examination tends to show he is capable of the work. The nervous strain and the probability of the ultimate development of some serious and lasting nervous disorder is far greater among such children.

Conveniently located scales for frequently testing the weight of such children could be of great assistance. A child who is not gaining in weight is in practically the same condition as the adult who is actively losing, and demands the watchful care of the family under the advice of the family physician; or as is so often necessary, the visiting nurse. It is certainly not fair to continue to overtax the physical strength of such a child and possibly aid in the development of some inherent weakness into actual disease. I firmly believe the ultimate result would be better if up to the twelfth or fourteenth years children were allowed only one session daily of three or four hours in school. Especially is this true of many of our older school buildings where the heating and ventilation are the very worst and the overcrowding is hopeless. If more time and attention were given by the charitably inclined among the very rich to providing playgrounds in the congested areas of our large cities there would, no doubt, be less need of their rich endowment of hospitals for the poor.

I take it to be unnecessary to refer in detail in this report to conditions reported so often before, such as the deplorable condition of many school buildings—oftentimes demanding new buildings—to the usefulness of open-air schoolrooms, to the need of convenient bathing facilities in many buildings where cleanliness seems unknown at home, to the overcrowding referred to above, and to the segregation of the epileptic and actually feeble-minded. The crying need for the immediate advancement of the work is more school nurses, at least two to each inspector, and without them it may be said that any plan to do more than we are now doing partakes largely of pure theory and is impossible of practical and successful application.

Respectfully submitted,

RICHARD A. URQUHART.

Report of Nurse Miss Agnes P. Kloman,

Assistant to Dr. Richard A. Urquhart.

BALTIMORE, August 15, 1913.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

I herewith submit report on school inspection for the year 1912-1913:

Number of children inspected by doctor and nurse in schools..	13,729
Number inspected in school by nurse..........................	7,345
Number inspected at home by nurse............................	276
Number treated at home by nurse..............................	6
Number treated at school by nurse............................	24
Number of homes visited......................................	957
Number of dispensary visits..................................	59

The work has been conducted about as usual, all cases of ringworm and pediculosis having been excluded till well under treatment. Owing to the prevalence of measles this year, the attendance has not been so good as usual. The vaccination of the school children has been very thoroughly conducted. The teachers are interested and helpful in this co-operation.

Respectfully yours,

AGNES P. KLOMAN.

TABLES

Medical Examination of

Public and Parochial Schools

MEDICAL EXAMINATION OF PUBLIC SCHOOLS.

TABLE No. 1—*Showing Total Defects of Children in Each School Examined by Dr. H. Warren Buckler and Miss Sally Lucas Jean.*

DEFECTS.	School 1.	School 4.	School 9.	School 10.	School 12.	School 22.	School 28.	School 29.	School 33.	School 34.	School 35.	School 70.	School 72.	School 76.	School 84.	School 92.	School 95.	School 106.	School 109.	Total.
Ear—																				
Deafness	1	3	1	1	3	2	4	2	1	3	2	5	3	9	7	3	....	3	....	53
Otitis media	....	1	1	1	2	2	....	2	....	2	....	1	1	2	1	....	2	3	....	21
Otorrhœa	....	....	....	....	....	1	....	....	....	....	....	....	....	2	....	....	....	....	....	3
Eye—																				
Blepharitis	1	6	....	2	....	2	1	1	2	5	....	2	1	5	....	1	2	1	....	32
Cataract	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	2
Conjunctivitis	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....	2
Eye strain	12	26	23	23	26	19	20	14	18	39	13	20	15	36	15	11	25	38	11	404
Opacity	....	....	....	....	3	....	2	....	....	....	1	1	2	....	....	....	1	6	4	20
Strabismus	....	....	1	....	2	3	4	3	2	6	4	1	2	5	4	5	2	5	....	49
Stye	....	....	....	....	....	....	....	....	....	....	3	....	....	....	....	....	....	....	....	3
Scalp—																				
Pediculosis	....	....	21	7	10	11	8	11	5	12	10	5	2	7	10	....	15	3	5	132
Ringworm	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	2
Mouth—																				
Teeth (defective)	43	50	58	72	105	57	40	46	32	77	39	65	15	53	34	35	45	59	45	970
Tongue-tie	....	....	....	....	....	....	....	1	....	....	....	2	....	1	....	....	....	....	....	4
Nose—																				
Adenoids	34	35	38	48	83	35	43	37	31	95	37	60	18	51	41	26	51	16	2	781
Rhinitis	....	6	....	....	18	11	8	....	7	32	....	....	....	....	....	....	11	18	36	147

Nervous System—																				
Epilepsy	....	....	....	....	1	....	....	4	1	....	1	....	....	....	....	....	....	....	....	7
Chorea	....	....	....	2	1	....	....	....	....	1	....	2	1	1	2	....	1	1	....	12
Mental deficiency	6	3	8	15	17	10	4	7	4	8	6	2	2	12	5	2	4	4	3	122
Paralysis (infantile)	1	....	....	1	....	1	....	....	1	2	1	....	....	....	1	....	1	....	....	9
Skin—																				
Eczema	....	....	....	....	....	....	....	....	....	....	....	....	....	3	....	....	....	....	....	3
Impetigo	4	2	1	....	4	2	1	8	6	2	1	2	....	4	3	1	2	....	1	38
Ringworm	1	....	....	....	....	....	....	....	1	3	....	3	....	2	....	....	....	9	1	20
Scabies	....	....	....	....	1	....	....	....	....	....	....	....	....	1	....	....	1	....	....	3
Throat—																				
Tonsils (enlarged)	27	43	40	42	61	42	42	28	31	64	37	46	8	36	38	39	32	33	25	713
Miscellaneous—																				
Adenitis	....	4	....	....	5	....	5	....	5	1	4	....	....	5	12	....	....	17	28	86
Enuresis	....	....	....	....	....	....	....	....	....	....	....	....	....	3	....	....	1	....	....	4
T. B. of spine	....	....	2	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1	....	4
T. B. of joints	....	....	....	....	1	....	1	....	....	....	1	....	....	....	....	....	....	....	....	3
T. B. of glands	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	2
T. B. of lungs	....	....	....	....	2	....	....	....	1	....	....	....	....	3	....	....	....	....	....	6
Deformities (rachitic)	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	18	8	26
Malnutrition	11	14	17	14	21	24	13	15	12	26	14	34	4	48	18	9	18	14	19	345
No. of children enrolled	269	513	380	413	627	479	437	306	437	625	341	597	206	528	577	422	427	645	422	8,651
No. of children examined	261	489	379	395	530	475	432	306	422	603	341	483	195	528	556	417	436	565	255	8,068
No. of children defective	77	111	120	119	135	132	95	78	84	216	84	131	59	177	129	69	120	125	87	2,148
No. of children excluded	....	7	3	....	....	....	1	1	1	....	....	4	....	2	2	....	2	....	....	23
No. of children ordered vaccinated	1	1	2	....	....	....	....	1	....	....	2	....	....	14	....	3	....	....	5	29

MEDICAL EXAMINATION OF PUBLIC SCHOOLS.

TABLE NO. 2—*Showing Total Defects of Children in Each School Examined by Dr. I. R. Page and Miss M. A. Gorter.*

DEFECTS.	School 11.	School 15.	School 18 Branch	School 19.	School 30.	School 48.	School 59.	School 60.	School 62.	School 63.	School 64 Branch.	School 65.	School 67.	School 68.	School 75.	School 78.	School 81.	School 86.	School 96.	School 98.	School 100.	School 109 Branch.	School 118 Branch.	Total.
Ear—																								
Deafness	5	3	1	4	3	....	2	4	1	....	1	4	....	1	....	3	1	4	2	4	2	1	....	46
Otorrhœa	2	....	....	1	....	....	....	....	2	....	....	1	....	....	....	1	1	....	....	1	....	....	....	9
Eye—																								
Blepharitis	10	4	2	1	1	....	2	20	14	5	3	3	2	5	2	4	8	5	3	....	2	....	....	96
Conjunctivitis	....	....	....	1	3	....	....	1	3	....	....	....	1	....	1	1	....	1	....	1	4	....	....	17
Eye strain	9	15	....	8	7	1	....	24	16	19	10	3	6	. 5	4	1	6	20	6	18	8	1	....	187
Opacity	1	2	....	....	3	....	....	2	....	....	....	....	....	....	....	....	1	....	....	3	....	....	....	12
Strabismus	7	3	....	3	6	1	....	4	6	4	1	....	6	....	....	2	1	3	1	1	....	....	....	49
Stye	2	1	....	....	....	....	....	1	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	6
All others	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	2
Scalp—																								
Alopecia	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Pediculosis	17	6	....	10	8	....	....	20	6	3	....	....	....	1	....	....	6	....	10	21	....	....	....	108
Seborrhœa	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Mouth—																								
Teeth (defect.)	59	34	....	32	47	19	17	51	28	25	17	28	44	60	6	24	26	59	135	53	44	9	....	817
Tongue-tie	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1
Cleft palate	....	....	....	....	....	....	3	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	4
Nose—																								
Adenoids	25	19	2	34	20	3	2	38	40	26	19	22	27	30	5	12	23	41	49	30	22	6	....	495
Rhinitis	9	....	....	12	5	....	....	....	3	....	1	9	8	9	1	6	....	4	22	12	2	3	....	106
Nervous System—																								
Epilepsy	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Chorea	....	1	....	....	....	....	....	....	1	....	....	....	1	....	....	1	1	....	....	....	....	....	....	5
Mental d'f'y	....	2	....	....	2	....	....	5	3	1	1	....	....	2	....	1	1	2	1	....	....	....	....	21
Paralysis (inf.)	....	....	....	1	....	....	....	2	3	....	1	1	....	....	....	....	....	....	1	1	1	....	....	11

Skin—																								
Acne									1															2
Eczema	1							1	1		1								2		2	1		9
Impetigo				3	2			2	2				3				2		1	1	1			17
Scabies								3									1							4
All others													1				2				1			4
Throat—																								
Pharyngitis	4	1		5	2			3	4			3		5	2	4	2	3	4	2	2			46
Tonsils (enlgd).	71	44	4	39	39	3	12	81	72		35	30	31	49	7	28	42	61	55	63	52	8	1	827
Tonsilitis	29																							29
Miscellaneous—																								
Adenitis		19		4		2	3	21	48		4	2	4		4	7	12	11			25		2	168
Enuresis								4	1															5
T. B. of spine				1	1								2											4
T. B. of joints								1																1
T. B. of lungs																					*4			4
Def't's (rachitic)												1						1			8			10
Filth		1			5									1										7
Malnutrition	69	15		16	11		6	42	36		6	11	4	7	5	4	28	19	7	4	22			312
Chickenpox										1														1
Measles										1														1
No. of children enrolled	589	502	47	359	437	97	154	552	619	503	260	323	350	405	118	306	360	554	531	633	564	50	59	8,372
No. of children examined	589	461	39	344	415	83	147	536	618	487	253	309	290	374	114	273	348	502	509	567	457	41	45	7,401
No. of children defective	233	155	8	135	142	17	39	262	241	170	75	84	121	146	29	87	130	184	258	189	187	18	3	2,913
No. of children excluded								4	2	3							2							11
No. of children ordered vac'n'd.	11	21	4	7	9	2	9	43	47	34	16	1	24	13	1	20	14	26	21	8	38	15	14	398

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*Undetermined.

MEDICAL EXAMINATION OF PUBLIC SCHOOLS.

TABLE No. 3—*Showing Total Defects of Children in Each School Examined by Dr. Henry B. Kolb and Mrs. H. E. Knorr.*

DEFECTS.	School 2.	School 3.	School 6.	School 7.	School 8.	School 23.	School 24.	School 25.	School 26.	School 27.	School 38.	School 40.	School 42.	School 43.	School 47.	School 73.	School 77.	School 93.	School 97.	School 105.	School 108.	Total.
Ear—																						
Deafness	5	1	....	2	....	1	1	....	....	1	1	....	....	1	1	1	....	....	....	....	....	15
Otitis media	3	....	1	....	1	1	4	1	2	1	1	....	....	1	1	....	....	....	....	1	....	18
Otorrhœa	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1
Eye—																						
Blepharitis	17	3	1	2	13	6	3	9	12	4	2	4	1	9	6	17	7	13	5	3	1	138
Conjunctivitis	1	....	....	....	....	1	....	....	1	1	1	....	....	....	....	....	....	1	1	....	....	7
Eye strain	12	7	9	4	5	4	2	7	2	1	3	2	....	1	4	1	....	7	....	3	....	74
Opacity	1	....	1	....	....	....	2	....	....	....	....	1	....	1	....	....	....	....	....	2	....	8
Strabismus	5	3	1	....	6	7	1	3	4	4	5	1	....	2	....	7	3	7	3	2	....	64
Stye	....	6	1	....	....	1	....	....	1	2	1	1	....	....	1	....	....	....	....	1	....	15
Ptosis	....	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	1	2	....	....	....	5
Corneal ulcer	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
All others	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	2	....	....	....	....	....	3
Scalp—																						
Pediculosis	227	34	31	24	99	31	42	104	68	16	15	44	6	129	11	137	4	129	41	....	....	1,192
Ringworm	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....	2
Seborrhœa	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	2
Mouth—																						
Teeth (defective)	71	58	14	4	43	35	166	17	36	21	29	2	....	68	9	47	7	96	31	35	6	795
Nose—																						
Adenoids	137	130	66	12	83	109	101	119	53	43	38	27	4	89	41	87	29	120	31	55	27	1,401
Rhinitis	51	26	21	4	31	37	26	42	15	9	11	3	2	38	3	28	1	46	8	11	5	418
Deviated septum	....	....	....	....	....	....	3	....	....	....	....	....	....	....	1	....	....	....	....	....	....	4
Nervous System—																						
Chorea	....	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	1	1	....	....	4
Mental deficiency	1	1	1	....	1	....	....	....	1	2	....	....	....	....	....	3	....	2	....	....	....	12
Facial paralysis	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	1
Paralysis (infantile)	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....	....	....	2
Defective speech	1	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	2

Skin—																						
Ecthyma	4	3	3	....	2	3	2	2	1	....	....	....	....	1	....	3	....	3	....	....	....	27
Eczema	4	1	1	....	....	1	....	4	1	....	1	1	....	1	....	1	....	....	....	....	....	16
Scabies	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	2
Porrigo	1	....	....	....	....	....	....	3	2	....	....	....	....	2	....	....	....	1	....	....	....	9
All others	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1
Dermatitis	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	2
Throat—																						
Pharyngitis	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	1	....	1	....	....	....	3
Tonsils (enlarged)	143	141	70	12	80	117	165	123	55	42	40	26	5	97	43	78	29	122	32	55	30	1,505
Tonsilitis	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2
Laryngitis	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	2
Miscellaneous—																						
Adenitis	....	2	....	....	....	....	2	1	....	....	....	....	....	1	....	....	....	....	....	1	....	7
T. B. of spine	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1
T. B. of joints	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	3
T. B. of lungs	*2	*1	....	....	....	*2	1	....	....	....	*1	....	....	....	....	....	....	....	....	*7	*2	15
Deformities—																						
Rachitic	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	7	....	7
Spine	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2
Feet	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Malnutrition	....	4	....	....	6	1	2	4	3	7	....	2	....	5	....	....	2	7	1	3	1	48
Hydrocephalus	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Fatty tumor	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Dacryocystitis	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
La grippe	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Heart disease	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	2
No. of children enrolled	953	661	371	128	564	649	586	686	437	335	184	232	99	824	257	659	194	940	290	590	221	9,860
No. of children examined	953	661	371	122	564	649	586	686	437	303	184	216	89	808	211	659	171	923	286	503	166	9,548
No. of children defective	460	277	152	43	254	219	325	278	172	97	94	73	14	310	73	282	50	371	110	119	42	3,815
No. of children excluded	12	5	....	1	....	2	3	9	1	2	2	2	....	4	2	4	....	1	2	....	....	52
No. of children ordered vaccinated	....	3	4	....	....	8	2	....	....	....	....	....	....	....	....	....	....	6	....	....	104	127

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*Undetermined.

MEDICAL EXAMINATION OF PUBLIC SCHOOLS.

TABLE NO. 4—*Showing Total Defects of Children in Each School Examined by Dr. A. K. Bond and Miss Virginia B. Lorentz.*

DEFECTS.	School 13.	School 37.	School 50.	School 51.	School 53.	School 54.	School 55.	School 56.	School 57.	School 71.	School 74.	School 83.	School 85.	School 99.	School 115.	Total.
Ear—																
Deafness	1	1	....	....	1	2	4	....	....	....	....	1	2	2	....	14
Otitis media	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1
Otorrhœa	....	....	....	....	....	....	....	....	....	....	....	....	1	2	....	3
Cerumen impaction	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	2
Eye—																
Blepharitis	16	34	3	27	12	9	24	2	7	8	15	2	22	35	....	216
Conjunctivitis	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....	2
Eye strain	8	1	1	2	5	6	6	1	....	10	1	11	3	15	....	70
Opacity	....	....	....	....	....	....	1	....	....	....	....	....	....	1	1	3
Strabismus	2	5	1	1	....	2	1	3	....	1	4	1	2	2	....	25
Stye	....	1	....	....	1	....	1	....	....	....	....	1	1	....	....	5
Ptosis	....	....	....	....	....	....	....	....	....	....	1	....	....	1	....	2
Scalp—																
Pediculosis	77	47	13	14	33	19	57	21	8	40	36	37	28	61	....	521
Mouth—																
Teeth (defective)	16	11	....	16	14	....	14	5	4	17	13	1	35	27	12	185
Nose—																
Adenoids	61	40	19	43	33	47	95	10	11	22	28	56	41	60	5	571

Nervous System—																
Epilepsy														1		1
Chorea		2											1			3
Mental deficiency	1	1				7	2	1				4	16	1		33
Speech impediment						1	1	2						2		6
Skin—																
Eczema											1					1
Impetigo	8	2	2	2										1		15
Ichthyosis														1		1
Ringworm						1								3		4
Seborrhœa				1												1
Dermatitis					2											2
Throat—																
Tonsils (enlarged)	63	53	21	47	42	52	76	11	16	30	34	75	56	87	12	675
Laryngitis										1						1
Miscellaneous—																
Adenitis	1	1				2	5	1				12		3		25
Enuresis				1										9		10
T. B. of spine		1														1
Deformities (spine)					1								2			3
Filth	4		1	1		2	1	1			1		1			12
Malnutrition	1	1		1	1	4	7			5	1	1	2	3		27
Abscess														1		1
No. of children enrolled	747	537	193	540	393	489	735	180	177	197	499	1,013	571	851	189	7,311
No. of children examined	727	527	175	534	334	470	702	177	152	186	492	1,004	526	835	158	6,999
No. of children defective	182	169	48	133	97	115	206	36	33	75	128	218	172	227	17	1,856
No. of children excluded	4	3			2	2		2			1	1	3	4		22
No. of children ordered vaccinated	14	26	2	15	7	15	11	22	3		11	2	8	10	3	149

TABLE NO. 5—*Showing Total Defects of Children in Each School Examined by Dr. Richard A. Urquhart and Miss Agnes P. Kloman.*

DEFECTS.	School 5.	School 14.	School 16.	School 20.	School 21.	School 31.	School 32.	School 39.	School 45.	School 49.	School 58.	School 61.	School 79.	School 80.	School 91.	School 94.	School 103.	School 107 and Annex.	School 110.	School 111.	School 112.	School 113.	School 116.	Total.
Ear—																								
Deafness	....	....	1	3	....	....	2	1	....	....	1	....	....	....	....	....	2	1	3	....	2	1	....	17
Otorrhœa	....	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	2	....	....	4
Eye—																								
Blepharitis	....	....	....	....	2	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	2	....	6
Conjunctivitis	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	1
Eye strain	19	10	6	23	....	17	10	7	5	....	4	9	9	8	....	16	28	28	21	32	36	23	11	322
Opacity	....	....	7	....	15	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	23
Strabismus	2	....	1	5	3	....	1	....	....	....	....	....	2	....	....	5	....	....	3	2	9	1	1	35
Scalp—																								
Pediculosis	56	11	52	28	20	29	10	12	10	....	6	11	23	....	1	43	1	....	8	38	....	6	....	365
Ringworm	....	....	....	....	....	....	....	....	....	....	....	....	....	....	4	....	13	11	6	6	....	....	....	40
Seborrhœa	....	....	....	1	....	....	1	....	....	....	....	....	1	....	....	....	....	2	1	....	....	....	....	6
Mouth—																								
Teeth (defect.)	91	23	52	185	35	55	29	29	9	4	21	14	32	51	55	9	107	77	60	125	158	50	32	1,274
Nose—																								
Adenoids	35	8	38	55	20	21	14	8	....	....	9	10	10	3	9	32	17	26	23	39	39	16	1	433
Rhinitis	....	....	....	....	....	....	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	4
Nervous System—																								
Epilepsy	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	1	....	....	....	4
Chorea	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Mental deficiency	2	2	....	....	....	5	1	....	1	....	1	....	3	....	....	....	2	....	....	....	....	....	....	17
Paralysis (inf.)	1	....	1	3	....	....	....	....	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....	7

Skin—																							
Acne	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	2
Eczema	....	....	....	....	....	2	....	....	....	....	....	....	1	....	2	1	....	....	....	....	....	....	....	6
Impetigo	....	....	5	1	....	2	....	....	....	....	1	....	1	....	....	....	....	....	....	....	....	....	....	10
Ringworm	....	....	....	....	2	....	1	....	....	....	....	....	....	....	....	3	4	7	....	2	16	....	....	35
Scabies	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	1	....	1	....	....	....	....	3
Herpes	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3	....	....	3
Throat—																								
Tonsils (enlgd).	13	5	16	12	9	10	16	5	2	1	4	7	5	2	8	17	9	13	12	26	37	11	4	244
Miscellaneous—																								
Enuresis	....	....	2	....	....	....	....	....	....	....	....	....	2	....	....	....	2	....	....	....	....	....	....	6
T. B. of spine	....	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	1	....	1	....	....	....	....	4
T. B. of joints	2	....	1	1	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	1	....	....	7
T. B. of glands	2	....	2	2	....	1	....	....	....	....	....	1	....	....	....	....	3	....	....	....	4	....	1	16
Def't's (rachitic)	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	12	20	7	....	....	39
Malnutrition	24	8	19	31	15	17	11	7	4	....	....	4	7	4	6	16	14	25	24	30	36	8	....	310
Chickenpox	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1
No. of children enrolled	675	267	439	878	250	371	295	209	100	30	160	352	235	196	367	623	581	765	630	780	1,097	541	185	10,026
No. of children examined	610	237	404	816	222	314	271	173	86	25	132	304	199	174	216	592	465	522	432	642	851	360	136	8,183
No. of children defective	40	56	182	263	92	134	76	53	26	5	32	52	69	58	84	192	184	167	136	277	337	107	48	2,670
No. of children excluded	5	2	14	5	3	2	3	1	3	....	2	....	2	3	....	10	9	10	4	12	7	2	....	99
No. of children ordered vac'n'd.	28	11	37	24	6	9	19	9	....	....	6	22	14	4	4	9	28	51	18	22	31	44	6	392

MEDICAL EXAMINATION OF PAROCHIAL SCHOOLS.

TABLE No. 6—*Showing Total Defects of Children in Each School Examined by Dr. H. Warren Buckler and Miss S. L. Jean.*

DEFECTS.	St. Peter's.	Fourteen Holy Martyrs.	St. Jerome's.	Our Lady of Good Counsel.	St. Joseph's.	St. Mary Star of the Sea.	Holy Cross.	Total.
Ear—								
Deafness	3	1	3	2	3	2	1	15
Otitis media	.....	1	1	3	3	1	.....	9
Eye—								
Blepharitis	5	2	1	3	.....	1	3	15
Conjunctivitis	.....	.....	.....	1	.....	.....	.....	1
Eye strain	27	11	24	12	1	22	8	105
Opacity	2	.....	4	.....	.....	.....	4	10
Strabismus	8	1	.....	5	.....	6	2	22
Scalp—								
Pediculosis	7	.....	5	7	2	4	5	30
Mouth—								
Teeth (defective)	52	23	44	45	28	37	41	170
Tongue-tie	.....	.....	1	.....	.....	.....	.....	1
Nose—								
Adenoids	57	21	17	17	12	33	20	177
Nervous System—								
Chorea	2	.....	.....	.....	.....	1	2	5
Mental deficiency	7	1	10	3	3	8	2	34
Paralysis (infantile)	.....	.....	.....	.....	1	.....	.....	1
Skin—								
Impetigo	1	.....	3	3	.....	2	.....	9
Throat—								
Tonsils (enlarged)	46	22	19	26	7	33	19	172
Miscellaneous—								
Adenitis	.....	.....	1	1	.....	.....	.....	2
T. B. of spine	.....	.....	1	.....	.....	.....	.....	1
T. B. of joints	.....	.....	.....	.....	1	.....	.....	1
Malnutrition	33	4	6	3	2	14	12	74
No. of children enrolled	399	201	320	262	120	498	243	2,043
No. of children examined	399	201	320	230	107	435	245	1,937
No. of children defective	155	60	90	83	39	107	69	603
No. of children excluded	1	.....	.....	1	.....	1	.....	3
No. of children ordered vaccinated	48	21	36	6	8	1	30	150

MEDICAL EXAMINATION OF PAROCHIAL SCHOOLS.

Table No. 7—*Showing Total Defects of Children in Each School Examined by Dr. A. K. Bond and Miss Virginia B. Lorentz.*

Defects.	St. Paul's.	St. Katharine's.	Cathedral.	St. James'.	St. Wenceslaus'.	St. Andrew's.	St. Alphonsus'.	Total.
Ear—								
Deafness	....	....	....	1	....	....	....	1
Otorrhœa	....	....	....	2	....	....	....	2
Eye—								
Blepharitis	31	4	10	22	7	5	....	79
Eye strain	4	1	7	6	....	1	....	19
Strabismus	3	1	....	4	1	....	....	9
Stye	....	....	....	....	1	2	....	3
Scalp—								
Pediculosis	57	17	8	31	7	10	2	132
Mouth—								
Teeth (defective)	14	10	13	20	14	12	6	99
Cleft palate	....	2	....	....	....	....	....	2
Hare-lip	....	1	....	....	....	....	1	2
Nose—								
Adenoids	27	9	9	20	12	11	3	91
Rhinitis	....	....	....	....	....	1	....	1
Nervous System—								
Chorea	....	1	....	....	....	....	....	1
Mental deficiency	....	....	....	....	1	....	....	1
Skin—								
Eczema	....	....	....	2	....	2	....	4
Impetigo	....	....	....	1	....	....	....	1
Furunculosis	1	....	....	....	....	....	....	1
Throat—								
Tonsils (enlarged)	28	15	13	26	21	19	3	125
Miscellaneous—								
Adenitis	....	....	....	1	1	....	....	2
Lameness	....	....	....	1	....	2	....	3
Malnutrition	1	....	....	1	....	....	....	2
No. of children enrolled	472	275	119	360	374	293	55	1,948
No. of children examined	398	270	119	345	237	258	44	1,671
No. of children defective	121	46	39	93	39	46	10	394
No. of children excluded	2	1	....	....	....	1	....	4
No. of children ordered vaccinated	43	82	8	128	107	44	8	420

MEDICAL EXAMINATION OF PAROCHIAL SCHOOLS.

TABLE NO. 8—*Showing Total Defects of Children in Each School Examined by Dr. I. R. Page and Miss M. A. Gorter.*

DEFECTS.	St. Joseph's.	St. Pius'.	St. Peter Claver's.	St. Gregory's.	St. Benedict's.	St. Martin's.		Total.
						Boys.	Girls.	
Ear—								
Deafness	.....	.....	.....	1	.....	1	.....	2
Eye—								
Blepharitis	3	2	.....	4	.....	1	3	13
Cataract	.....	.....	1	.....	.....	.....	.....	1
Conjunctivitis	.....	.....	.....	.....	.....	.....	1	1
Eye strain	2	4	.....	5	1	.....	1	13
Opacity	.....	.....	.....	.....	.....	2	.....	2
Strabismus	.....	.....	2	1	.....	2	.....	5
Scalp—								
Alopecia	.....	.....	1	.....	.....	.....	.....	1
Pediculosis	5	3	.....	7	2	.....	2	19
Mouth—								
Teeth (defective)	24	5	13	21	18	.....	30	111
Cleft palate	.....	.....	.....	.....	.....	1	1	2
Nose—								
Adenoids	7	.....	15	11	4	10	13	60
Rhinitis	6	.....	.....	1	2	.....	1	10
Nervous System—								
Mental deficiency	.....	.....	.....	2	.....	.....	.....	2
Paralysis (infantile)	1	.....	.....	.....	.....	.....	.....	1
Skin—								
Acne	.....	.....	.....	2	.....	.....	.....	2
Eczema	.....	.....	.....	.....	.....	.....	1	1
Impetigo	1	.....	.....	.....	.....	.....	.....	1
Scabies	.....	.....	.....	1	.....	.....	.....	1
Throat—								
Pharyngitis	.....	2	.....	4	.....	.....	2	8
Tonsils (enlarged)	1	13	18	27	11	12	33	115
Miscellaneous—								
Adenitis	.....	9	4	5	.....	4	4	26
T. B. of joint	.....	.....	.....	.....	.....	.....	1	1
T. B. of lungs	.....	.....	.....	*3	.....	.....	.....	*3
Deformities (rachitic)	.....	.....	1	.....	.....	.....	.....	1
Malnutrition	.....	1	10	27	2	3	3	46

*Undetermined.

MEDICAL EXAMINATION OF PAROCHIAL SCHOOLS.

TABLE No. 8 (Continued)—*Showing Total Defects of Children in Each School Examined by Dr. I. R. Page and Miss M. A. Gorter.*

DEFECTS.	St. Joseph's.	St. Pius'.	St. Peter Claver's.	St. Gregory's.	St. Benedict's.	St. Martin's.		Total.
						Boys.	Girls.	
No. of children enrolled	164	193	233	273	131	281	304	1,579
No. of children examined	164	136	182	222	131	241	294	1,370
No. of children defective	47	24	41	56	37	25	58	288
No. of children excluded	.....	.....	.....	.....	.....	.....	.....	.....
No. of children ordered vaccinated	59	30	3	59	24	77	86	338

MEDICAL EXAMINATION OF PAROCHIAL SCHOOLS.

TABLE NO. 9—*Showing Total Defects of Children in Each School Examined by Dr. R. A. Urquhart and Miss Agnes P. Kloman*

DEFECTS.	St. John's		St. Thomas'.	Sts. Philip and James.	Corpus Christi.	St. Barnabas'.	Immaculate Conception.	St. Ann's.	Total.
	Girls.	Boys.							
Ear—									
Deafness	....	....	....	....	2	....	....	....	2
Otorrhœa	1	....	....	....	....	....	....	....	1
Eye—									
Blepharitis	....	....	....	2	....	....	....	....	2
Eye strain	5	8	5	3	3	7	5	6	42
Strabismus	2	4	2	1	2	....	....	....	11
Scalp—									
Pediculosis	32	5	....	12	9	3	9	12	82
Seborrhœa	....	....	....	....	....	....	....	1	1
Mouth—									
Teeth (defective)	58	43	14	3	20	19	38	25	220
Nose—									
Adenoids	13	16	8	7	4	3	11	9	71
Rhinitis	....	....	3	....	....	....	....	3	6
Skin—									
Acne	....	....	1	....	....	....	....	....	1
Eczema	....	....	....	....	....	....	1	1	2
Impetigo	6	....	....	1	....	....	....	....	7
Ringworm	....	....	....	....	....	7	....	....	7
Throat—									
Tonsils (enlarged)	3	8	5	1	4	5	4	10	40
Miscellaneous—									
T. B. of glands	....	2	....	....	....	....	....	....	2
Deformities (rachitic)	....	....	....	....	....	3	....	....	3
Malnutrition	17	10	6	7	8	13	7	13	81
No. of children enrolled	282	281	113	156	133	174	189	328	1,656
No. of children examined	229	208	82	105	95	129	154	266	1,268
No. of children defective	98	77	30	34	36	46	54	73	448
No. of children excluded	4	....	....	3	3	3	4	2	19
No. of children ordered vaccinated	77	41	13	37	32	54	42	75	371

MEDICAL EXAMINATION OF PAROCHIAL SCHOOLS.

TABLE NO. 10—*Showing Total Defects of Children in Each School Examined by Dr. Henry B. Kolb and Mrs. Henrietta E. Knorr.*

DEFECTS.	St. Cassimir's.	St. Bridget's.	St. Michael's.	St. Stanislaus'.	Holy Rosary.	St. Leo's.	St. Patrick's.		St. Elizabeth's.	Total.
							Boys.	Girls.		
Ear—										
Deafness	....	....	1	....	....	....	1	....	....	2
Otitis media	....	1	....	2	1	1	....	....	2	7
Otorrhœa	1	....	....	....	....	....	1	....	....	2
Cerumen impaction	....	....	....	....	....	....	1	....	....	1
Eye—										
Blepharitis	1	3	20	5	7	....	3	3	9	51
Conjunctivitis	....	1	....	....	....	....	....	....	....	1
Eye strain	....	....	1	4	3	2	....	....	....	10
Opacity	1	....	1	3	....	1	1	....	....	7
Strabismus	....	....	....	3	6	....	....	....	1	10
Stye	1	5	6	2	1	1	....	....	....	16
Ptosis	1	....	....	....	....	....	....	....	....	1
Scalp—										
Pediculosis	3	4	19	3	49	24	....	....	....	102
Mouth—										
Teeth (defective)	21	22	16	37	26	8	4	3	19	156
Cleft palate	1	....	....	....	....	....	....	....	....	1
Nose—										
Adenoids	73	73	124	63	100	27	14	24	20	518
Rhinitis	14	10	16	17	12	22	6	2	12	111
Nervous System—										
Mental deficiency	....	....	....	....	2	1	....	....	....	3
Paralysis (inf.)	....	....	1	....	....	....	....	....	....	1
Paralysis (facial)	....	....	1	....	....	....	....	....	....	1
Skin—										
Ecthyma	2	1	1	1	2	2	2	....	....	11
Eczema	1	1	2	1	3	2	....	....	2	12
Impetigo	....	....	....	1	....	1	....	....	....	2
Ringworm	....	....	....	....	....	1	....	....	....	1
Scabies	1	....	....	....	....	....	....	....	1	2
Porrigo	....	....	....	....	1	....	....	....	....	1
Throat—										
Pharyngitis	....	1	....	....	....	1	....	....	....	2
Tonsils (enlarged)	77	81	127	62	101	27	14	24	20	533
Tonsilitis	....	1	....	....	....	....	....	....	1	2

MEDICAL EXAMINATION OF PAROCHIAL SCHOOLS.

TABLE No. 10 (Continued)—*Showing Total Defects of Children in Each School Examined by Dr. Henry B. Kolb and Mrs. Henrietta E. Knorr.*

DEFECTS.	St. Cassimir's.	St. Bridget's.	St. Michael's.	St. Stanislaus'.	Holy Rosary.	St. Leo's.	St. Patrick's.		St. Elizabeth's.	Total.
							Boys.	Girls.		
Miscellaneous—										
Adenitis	....	....	2	1	....	....	....	....	1	4
T. B. of joints	....	....	1	1	....	....	....	....	....	2
T. B. of lungs	....	....	*2	....	....	....	....	....	....	*2
Ankylosis	....	....	1	1	....	....	....	....	....	2
Deformities (spine)	....	....	....	....	1	....	....	....	....	1
Malnutrition	....	....	....	1	8	....	....	....	1	10
Fatty tumor	....	....	....	....	....	....	....	....	1	1
No. of children enrolled	450	365	826	816	930	356	170	190	457	4,560
No. of children examined	367	351	769	763	791	290	153	173	398	4,055
No. of children defective	119	116	151	139	214	83	30	31	64	947
No. of children excluded	1	....	....	2	....	3	....	....	3	9
No. of children ordered vaccinated	88	47	140	261	357	84	27	38	121	1,163

*Undetermined.

MEDICAL EXAMINATION OF PUBLIC SCHOOLS.

Table No. 11—*Review of Defectives in Schools Nos.* 1, 4, 9, 10, 12, 22, 28, 29, 33, 34, 35, 70, 72, 76, 84, 92, 95, 104 *and* 106, *by Dr. H. Warren Buckler and Miss Sallie Lucas Jean.*

Defects.	Cured.	Improved.	Unimproved.
Ear—			
Deafness	1	19	34
Otitis media	3	9	3
Otorrhœa	1	3	....
Eye—			
Blepharitis	14	8	3
Eye strain	151	7	164
Keratitis	....	1	2
Opacity	....	1	6
Strabismus	1	20	17
Stye	1	....	....
Scalp—			
Pediculosis	75	4	11
Ringworm	3	3	3
Mouth—			
Teeth (defective)	66	79	471
Tongue-tie	....	....	1
Skin—			
Impetigo	28	....	....
Ringworm	5	3	....
Scabies	4	....	....
Nose—			
Adenoids	114	4	467
Nervous System—			
Chorea	1	6	2
Throat—			
Tonsils (enlarged)	67	17	378
Miscellaneous—			
Adenitis	1	1	2
Malnutrition	6	84	150
T. B. of spine	....	2	1
T. B. of glands	....	3	1
T. B. of lungs	....	11	....
Filth	....	8	....
Spinal curvature	....	2	....
Total defects	542	295	1,716

MEDICAL EXAMINATION OF PUBLIC SCHOOLS.

TABLE NO. 12—*Review of Defectives in Schools Nos. 2, 3, 6, 7, 8, 23, 24, 25, 26, 27, 38, 40, 42, 43, 47, 73, 77, 93, 97, 105 and 108 by Dr. Henry B. Kolb and Mrs. H. E. Knorr.*

DEFECTS.	Cured.	Improved.	Unimproved.
Ear—			
Deafness	4	6	3
Otitis media	2	4	4
Otorrhœa			2
Eye—			
Blepharitis	56	33	18
Conjunctivitis	5		
Eye strain	2	51	28
Opacity			4
Strabismus		23	25
Stye	7		
Ptosis			4
Pink eye	1		
Dacryocystitis	2		
Scalp—			
Alopecia	1		
Pediculosis	429	437	96
Mouth—			
Teeth (defective)	98	42	403
Skin—			
Eczema	4	3	
Porigo	4	2	
Ringworm	1		
Ecthyma	18		2
Furunculosis	1		
Nose—			
Adenoids	204	261	470
Rhinitis	177	12	85
Deformities			2
Ozena		1	
Nervous System—			
Chorea	2	1	
Defective speech		1	
Throat—			
Pharyngitis	2		
Tonsils (enlarged)	221	283	528
Acute Tonsilitis	1		

MEDICAL EXAMNATIONS OF PUBLC SCHOOLS.

TABLE NO. 12 (Continued)—*Review of Defectives in Schools Nos.* 2, 3, 6, 7, 8, 23, 24, 25, 26, 27, 38, 40, 42, 43, 47, 73, 77, 93, 97, 105 *and* 108, *by Dr. Henry B. Kolb and Mrs. H. E. Knorr.*

DEFECTS.	Cured.	Improved.	Unimproved.
Miscellaneous—			
Adenitis	2	2	1
Malnutrition	7	19	8
T. B. joints		2	
T. B. lungs (suspect)		6	6
Deformities		1	
Fracture	1		
Spinal curvature		1	
La Grippe	1		
Total defects	1,253	1,191	1,688

MEDICAL EXAMINATION OF PUBLIC SCHOOLS.

TABLE No. 13—*Review of Defectives in Schools Nos.* 5, 13, 14, 16, 20, 21, 31, 32, 39, 45, 49, 58 *and Annex,* 61, 79, 80, 94, 103, 107 *and Annex,* 110, 111, 112, 116 *and* 118, *by Dr. Richard A. Urquhart and Miss Agnes P. Kloman.*

DEFECTS.	Cured.	Improved.	Unimproved.
Ear—			
Deafness	1	10	3
Otorrhœa	....	1	....
Eye—			
Blepharitis	7	4	2
Eye strain	150	55	158
Opacity	....	2	1
Strabismus	4	9	28
Scalp—			
Pediculosis	127	67	96
Ringworm	19	10	9
Seborrhœa	5	....	....
Mouth—			
Teeth (defective)	203	68	786
Skin—			
Acne	....	6	....
Eczema	5	4	....
Impetigo	12	....	....
Ringworm	16	14	4
Scabies	4	....	....
Nose—			
Adenoids	131	....	281
Throat—			
Tonsils (enlarged)	138	22	152
Miscellaneous—			
Adenitis	....	2	2
Malnutrition	21	70	91
Enuresis	....	6	1
T. B. of spine	....	10	....
T. B. of joints	....	6	....
T. B. of glands	....	9	7
Total defects	843	375	1,621

MEDICAL EXAMINATION OF PUBLIC SCHOOLS.

TABLE NO. 14—*Review of Defectives in Schools Nos.* 13, 37, 50, 51, 53, 54, 55, 56, 57, 71, 74, 83, 85, 99 *and* 115, *by Dr. A. K. Bond and Miss Virginia B. Lorentz.*

DEFECTS.	Cured.	Improved.	Unimproved.
Ear—			
Deafness	2	5	3
Otitis media	1	....	....
Otorrhœa	3	4	2
Eye—			
Blepharitis	81	42	55
Conjunctivitis	3	....	....
Coryza	1	....	....
Eye strain	88	10	27
Strabismus	11	2	16
Stye	8	....	....
Scalp—			
Pediculosis	225	165	56
Seborrhœa	2	....	....
Mouth—			
Teeth (defective)	80	12	21
Alveolar abs.	1	....	....
Skin—			
Eczema	7	1	....
Impetigo	9	1	....
Ringworm	1	....	....
Nose—			
Adenoids	309	64	241
Rhinitis	2	....	....
Nervous System—			
Stuttering	....	....	1
Throat—			
Pharyngitis	2	....	....
Tonsils (enlarged)	361	88	252
Miscellaneous—			
Adenitis	33	6	3
Malnutrition	15	6	7
Enuresis	1	....	....
Anaemia	3	1	....
Total defects	1,249	407	684

MEDICAL EXAMINATION OF PUBLIC SCHOOLS.

TABLE No. 15—*Review of Defectives in Schools Nos.* 11, 15, 19, 30, 48, 59, 60, 62, 63, 64, 65, 67, 68, 75, 78, 81, 86, 96, 98, 100, 109 *Branch and* 118 *Branch, by Dr. I. R. Page and Miss M. A. Gorter.*

DEFECTS.	Cured.	Improved.	Unimproved.
Ear—			
Deafness	4	12	21
Otitis media	...	...	1
Otorrhœa	...	6	2
Eye—			
Blepharitis	43	24	7
Conjunctivitis	9	2	2
Coryza	5	...	...
Eye strain	63	69	56
Opacity	...	1	6
Strabismus	3	16	15
Stye	...	1	...
Ptosis	...	...	2
Obstructed tear duct	...	1	...
Scalp—			
Pediculosis	8	71	5
Seborrhœa	...	...	1
Mouth—			
Teeth (defective)	4	190	409
Cleft palate	...	...	4
Skin—			
Eczema	4	3	2
Impetigo	13	...	...
Scabies	1	1	1
Herpes	3	...	...
Nose—			
Adenoids	100	45	233
Rhinitis	40	33	8
Nervous System—			
Chorea	...	3	...
Throat—			
Pharyngitis	42	1	...
Tonsils (enlarged)	133	166	248
Miscellaneous—			
Adenitis	23	42	44
Malnutrition	43	164	32
T. B. of joints	...	1	...
T. B. of glands	...	1	...
Filth	7	4	1
Anaemia	2	2	...
Total defects	550	859	1,100

MEDICAL EXAMINATION OF PAROCHIAL SCHOOLS.

TABLE No. 16—*Review of Defectives in Parochial Schools Holy Cross, St. Joseph's, Fourteen Holy Martyrs', St. Peter's, St. Jerome's, St. Mary's and Our Lady of Good Counsel, by Dr. H. Warren Buckler and Miss Sally Lucas Jean.*

DEFECTS.	Cured.	Improved.	Unimproved.
Ear—			
Deafness	3	5	7
Otitis media	....	4	1
Eye—			
Blepharitis	14	1	6
Eye strain	35	1	48
Strabismus	....	9	10
Scalp—			
Pediculosis	14	....	....
Mouth—			
Teeth (defective)	....	12	191
Alveolar abs.	1	....	....
Skin—			
Impetigo	10	....	....
Ringworm	2	....	....
Nose—			
Adenoids	20	....	112
Nervous System—			
Chorea	....	4	1
Throat—			
Tonsils (enlarged)	11	....	94
Miscellaneous—			
Malnutrition	1	8	31
T. B. of joints	1	....	....
T. B. of lungs	....	1	....
Total defects	112	45	501

MEDICAL EXAMINATION OF PAROCHIAL SCHOOLS.

TABLE NO. 17—*Review of Defectives in Parochial Schools St. Bridget's, St. Casimir's, St. Michael's (male and female), St. Stanislaus', Holy Rosary, St. Patrick's (male and female), St. Elizabeth's and St. Leo's, by Dr. H. B. Kolb and Mrs. H. E. Knorr.*

DEFECTS.	Cured.	Improved.	Unimproved.
Ear—			
Deafness	....	1	1
Otitis media	1	2	4
Otorrhœa	2	....	1
Eye—			
Blepharitis	21	13	9
Conjunctivitis	1	1	....
Eye strain	....	4	7
Opacity	....	....	4
Strabismus	....	5	6
Stye	10	....	....
Ptosis	....	....	1
Scalp—			
Pediculosis	53	29	5
Mouth—			
Teeth (defective)	40	20	78
Cleft palate	....	....	1
Skin—			
Eczema	8	3	....
Scabies	1	....	....
Ecthyma	8	....	....
Nose—			
Adenoids	70	90	249
Rhinitis	49	3	28
Throat—			
Pharyngitis	1	....	....
Tonsils (enlarged)	64	88	205
Acute tonsilitis	1	....	....
Miscellaneous—			
Adenitis	....	....	1
Malnutrition	3	2	2
T. B. of joints	....	2	....
T. B. of lungs	....	1	....
Total defects	328	264	602

MEDICAL EXAMINATION OF PAROCHIAL SCHOOLS.

TABLE NO. 18—*Review of Defectives in Parochial Schools St. Pius', St. Martin's (male and female), St. Peter Claver's, St. Benedict's, St. Gregory's and St. Joseph's, by Dr. I. R. Page and Miss M. A. Gorter.*

DEFECTS.	Cured.	Improved.	Unimproved.
Ear—			
Deafness	....	....	1
Eye—			
Blepharitis	4	3	3
Eye strain	3	9	7
Opacity	....	....	1
Scalp—			
Pediculosis	....	6	3
Mouth—			
Teeth (defective)	3	11	29
Cleft palate	....	....	2
Skin—			
Eczema	2	....	....
Nose—			
Adenoids	16	4	27
Rhinitis	13	....	1
Nervous System—			
Chorea	....	1	....
Throat—			
Pharyngitis	2	4	....
Tonsils (enlarged)	13	14	52
Miscellaneous—			
Adenitis	3	2	4
Malnutrition	1	6	....
Total defects	60	60	130

MEDICAL EXAMINATION OF PAROCHIAL SCHOOLS.

TABLE No. 19—*Review of Defectives in Parochial Schools St. Katharine's, Cathedral, St. Wenceslaus', St. James', St. Paul's and St. Andrews', by Dr. A. K. Bond and Miss Virginia B. Lorentz.*

DEFECTS.	Cured.	Improved.	Unimproved.
Ear—			
Deafness	2	....	....
Otorrhœa	2	3	....
Eye—			
Blepharitis	38	18	9
Eye strain	16	7	3
Strabismus	4	....	1
Stye	3	....	....
Scalp—			
Pediculosis	70	30	15
Mouth—			
Teeth (defective)	19	4	5
Tongue-tie	....	....	1
Skin—			
Eczema	6	....	....
Impetigo	1	....	....
Ringworm	5	2	2
Furunculosis	1	....	....
Nose—			
Adenoids	37	3	43
Rhinitis	4	....	....
Throat—			
Tonsils (enlarged)	59	3	67
Miscellaneous—			
Adenitis	7	....	3
Malnutrition	....	1	....
Total defects	274	71	149

MEDICAL EXAMINATION OF PAROCHIAL SCHOOLS.

TABLE No. 20—*Review of Defectives in Parochial Schools St. Barnabas,' Immaculate Conception, St. Thomas', Corpus Christi, St. Ann's, St. John's (male and female), and Sts. Philip and James, by Dr. Richard A. Urquhart and Miss Agnes P. Kloman.*

DEFECTS.	Cured.	Improved.	Unimproved.
Ear—			
Deafness	....	1	1
Eye—			
Blepharitis	3	1	....
Coryza	3	....	....
Eye strain	20	11	26
Strabismus	....	6	5
Scalp—			
Pediculosis	24	15	26
Mouth—			
Teeth (defective)	50	19	100
Skin—			
Acne	....	2	....
Eczema	2	....	....
Impetigo	4	....	....
Ringworn	3	2	1
Nose—			
Adenoids	18	....	35
Nervous System—			
Chorea	1	....	....
Throat—			
Tonsils (enlarged)	15	7	29
Acute tonsilitis	2	....	....
Miscellaneous—			
Malnutrition	2	21	14
T. B. of joints	....	2	....
Total defects	147	87	237

INDIVIDUAL AND TOTAL WORK OF SCHOOL NURSES.

	Pupils Inspected at School.	Pupils Inspected at Home.	Pupils Treated at School.	Pupils Treated at Home.	Number of Visits to Homes.	Number of Visits to Dispensaries.
Miss S. L. Jean—						
October, 1912	1,525	101	8	......	148	19
November, 1912	2,191	133	12	1	218	25
December, 1912	1,633	83	2	......	128	21
January, 1913	510	54	2	......	80	10
February, 1913	712	91	10	......	162	3
March, 1913	1,011	109	3	1	183	21
April, 1913	690	95	1	1	162	52
May, 1913	743	78	1	......	153	41
Total	9,015	744	39	3	1,234	192
Miss A. P. Kloman—						
October, 1912	1,311	73	......	......	225	19
November, 1912	544	14	3	......	44	4
December, 1912	670	21	1	......	123	1
January, 1913	1,671	43	6	1	126	15
February, 1913	830	47	1	1	156	4
March, 1913	780	39	......	3	115	3
April, 1913	1,125	34	......	4	111	16
May, 1913	576	34	6	5	108	9
Total	7,507	305	17	14	1,008	71
Miss M. A. Gorter—						
October, 1912	854	16	12	......	62	4
November, 1912	999	29	5	......	112	3
December, 1912	318	6	......	2	48	3
January, 1913	1,038	13	13	......	81	19
February, 1913	761	18	8	......	94	41
March, 1913	1,289	23	9	......	134	9
April, 1913	1,391	11	27	......	77	16
May, 1913	818	57	18	4	114	12
Total	7,468	173	92	6	722	107

INDIVIDUAL AND TOTAL WORK OF SCHOOL NURSES—*Continued.*

	Pupils Inspected at School.	Pupils Inspected at Home.	Pupils Treated at School.	Pupils Treated at Home.	Number of Visits to Homes.	Number of Visits to Dispensaries.
Miss M. V. Lorentz—						
October, 1912	1,825	29	1	......	92	9
November, 1912	2,092	34	......	......	73	2
December, 1912	1,463	35	......	......	73	7
January, 1913	1,992	16	......	......	82	2
February, 1913	2,071	26	......	1	95	3
March, 1913	2,226	23	1	......	71	4
April, 1913	2,311	30	......	6	104	12
May, 1913	1,460	22	1	3	70	3
Total	15,440	215	3	10	660	42
Mrs. H. E. Knorr—						
October, 1912	1,804	5	1	2	140	12
November, 1912	2,899	2	......	5	135	19
December, 1912	1,903	6	......	......	66	10
January, 1913	3,865	2	......	......	93	5
February, 1913	3,181	......	......	......	102	5
March, 1913	2,384	2	4	......	105	2
April, 1913	1,597	6	......	......	151	12
May, 1913	1,773	17	......	......	162	6
Total	19,406	40	5	7	954	71
Grand total	58,836	1,477	156	40	4,578	483

SPECIAL TABLES

TUBERCULOSIS
PNEUMONIA
BRONCHO-PNEUMONIA
BRONCHITIS
ALIMENTARY CANAL
INANITION
MARASMUS
CANCER
HEART DISEASES
BRIGHT'S DISEASE
TYPHOID FEVER
SCARLET FEVER
DIPHTHERIA
WHOOPING COUGH
MEASLES

GENERAL

Deaths from All Causes, by Wards, Age, Sex, and Color, Including

WARDS.	Under 1 Month.				Between 1 and 3 Months.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	23	19	....	....	6	7	....	....
Second	19	12	....	....	12	7	1	....
Third	20	9	1	4	12	3	1	....
Fourth	18	9	4	4	3	1	8	1
Fifth	9	7	3	4	3	3	1	....
Sixth	11	14	4	4	5	2	3	3
Seventh	21	15	7	6	8	5	1	1
Eighth	14	8	4	5	6	8	3	1
Ninth	12	12	....	1	4	6	....	1
Tenth	5	9	1	3	2	2	....	3
Eleventh	4	2	9	4	2	1	2	2
Twelfth	*12	10	8	2	2	....	1	5
Thirteenth	8	11	....	....	9	5	1	1
Fourteenth	18	21	11	15	43	40	1	7
Fifteenth	9	6	9	10	1	4	8	5
Sixteenth	12	3	10	9	2	....	2	1
Seventeenth	3	3	21	12	4	1	8	9
Eighteenth	12	11	4	1	13	9	3	4
Nineteenth	16	15	3	3	4	6	....	....
Twentieth	17	11	3	....	5	5	....	....
Twenty-first	13	4	2	1	8	5	2	....
Twenty-second	6	5	6	3	1	3	1	2
Twenty-third	16	11	4	2	7	....	1	3
Twenty-fourth	13	16	....	....	8	12	....	....
Bay View, not in city wards	....	....	....	1	....	1	....	....
Sydenham, not in city wards	....	....	....	....	....	....	....	....
Totals	311	243	114	94	170	136	48	49
Bay View, in city wards	....	....	....	....	....	....	....	....
Sydenham, in city wards	....	....	....	....	....	....	....	....
Mount Wilson, in city wards	....	....	....	....	3	1	1	3

*Sex unknown.

TABLE No. 1.

Bay View, Sydenham and Mount Wilson Sanatorium, Year 1913.

Three Months to 12 Months.				Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
33	31	....	1	26	8	1	1	7	3	....	....	3	1	....	....
34	21	....	5	12	10	....	1	3	5	....	....	2	1	....	....
18	14	2	2	10	10	....	1	3	8	1	1	2	....	....	....
8	5	17	8	5	3	7	5	2	2	2	3	....	1	2	1
6	6	10	5	4	4	2	3	1	1	....	1	....	....	....	....
12	11	7	3	6	8	3	2	....	5	....	1	2	2	....	....
18	11	2	2	7	9	5	2	2	2	....	1	2	2	....	....
11	15	3	1	5	7	....	....	6	6	1	1	2	4	....	....
6	9	1	....	4	2	1	....	2	2	....	....	2	3	....	....
8	6	5	1	10	1	....	....	....	1	....	....	1	1	....	....
2	....	8	8	....	....	2	2	....	....	1	1	....	....	....	....
5	7	9	3	4	1	2	5	1	1	1	1	....	....	1	1
9	12	1	3	8	3	....	....	....	....	....	2	1	....	....	....
30	28	11	11	7	7	3	8	1	2	2	5	2	....	2	....
11	7	15	8	7	1	6	7	1	1	1	1	....	1	2	1
6	4	10	11	3	1	4	8	1	3	2	1	1	1	1	....
3	1	18	13	....	2	8	8	....	....	3	4	....	....	....	....
16	18	6	7	4	5	2	3	2	4	3	1	2	1	....	2
13	12	2	4	11	4	2	1	2	....	2	....	2	2	2	....
4	17	2	....	5	2	1	....	2	9	....	....	3	....	....	....
19	15	7	1	6	2	3	1	2	1	2	....	....	1	....	....
11	4	4	6	3	1	3	2	2	4	1	1	1	....	....	2
7	13	2	....	4	1	2	1	2	1	1	....	2	....	....	....
50	29	1	....	19	26	....	....	13	9	....	....	4	5	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
350	296	143	103	170	119	57	61	55	70	23	25	34	26	10	7
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	2	1	....	....	1	2	....	....	....	1	....	....
9	9	3	9	2	1	1	1	1	....	....	....	....	....	....	....

Continued on next page.

GENERAL TABLE

Deaths from All Causes, by Wards, Age, Sex, and Color, Including

WARDS.	Between 4 and 5 Years.				Between 5 and 9 Years.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	1	....	....	4	2	....	....
Second	....	1	....	....	2	1	....	....
Third	1	2	....	....	9	5	1	....
Fourth	2	....	4	1	2	2	2	6
Fifth	....	....	....	1	3	2	3	3
Sixth	....	....	....	....	5	7	....	1
Seventh	1	2	1	....	....	6	....	1
Eighth	3	1	....	....	3	5	....	1
Ninth	....	1	....	1	3	4	....	....
Tenth	2	1	1	....	....	3	1	....
Eleventh	....	....	1	....	1	1	1	2
Twelfth	....	....	....	1	1	3	....	1
Thirteenth	....	1	....	....	2	1	1	....
Fourteenth	....	....	3	....	4	....	1	3
Fifteenth	2	1	1	1	6	3	2	1
Sixteenth	2	1	....	....	2	1	1	1
Seventeenth	....	....	1	....	2	....	3	5
Eighteenth	1	2	....	....	5	1	3	....
Nineteenth	....	2	....	2	....	5	2	3
Twentieth	....	4	....	....	5	7	....	....
Twenty-first	2	2	1	1	3	....	....	2
Twenty-second	....	....	2	....	....	1	1	5
Twenty-third	4	1	1	1	3	5	....	....
Twenty-fourth	2	4	....	....	10	6	....	....
Bay View, not in city wards	....	....	....	....	....	....	....	....
Sydenham, not in city wards	....	....	....	....	....	....	....	....
Totals	22	27	16	9	75	71	22	35
Bay View, in city wards	....	....	....	....	....	....	....	....
Sydenham, in city wards	2	....	....	....	5	3	....	....
Mount Wilson, in city wards	....	....	....	....	....	....	....	....

No. 1 (Continued).

Bay View, Sydenham and Mount Wilson Sanatorium, Year 1913.

Between 10 and 14 Years.				Between 15 and 19 Years.				Between 20 and 24 Years.				Between 25 and 29 Years.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
5	1	1	....	1	3	....	....	1	8	....	....	14	10	....	....
1	4	....	....	2	5	....	....	3	11	....	1	6	7	....	2
3	3	....	....	2	....	1	1	4	7	1	1	10	1	5	2
....	....	1	4	11	6	2	2	16	6	†6	7	14	7	8	5
....	3	....	1	3	1	2	3	3	4	5	1	5	2	5	8
....	1	1	....	2	13	....	4	6	3	1	1	8	8	2	2
3	2	....	....	7	6	3	2	6	12	2	1	10	11	8	3
2	1	....	....	6	6	2	....	8	14	2	....	12	10	3	2
2	1	2	....	5	1	....	1	10	7	4	....	7	9	....	....
1	1	1	....	4	1	....	....	4	1	2	3	9	3	....	2
1	....	....	1	1	....	4	5	3	3	6	8	2	3	6	6
1	3	....	2	2	....	....	3	5	4	1	4	8	5	7	2
3	3	....	....	3	2	1	....	4	11	....	....	6	3	1	....
1	1	....	3	1	1	2	5	2	4	6	5	2	5	4	10
2	2	1	1	5	2	4	7	3	7	2	2	5	5	2	7
....	2	....	4	1	1	3	6	9	4	3	3	6	4	6	5
....	....	2	1	....	....	9	7	....	....	17	10	3	1	10	7
2	1	....	1	1	4	1	3	4	5	6	3	6	3	3	4
2	2	1	1	....	3	....	....	8	6	1	1	3	5	5	1
1	....	....	....	3	5	....	1	8	10	....	1	8	8	1	....
1	2	....	2	4	3	....	3	5	8	3	4	10	5	5	2
....	....	2	1	3	....	2	4	3	1	8	5	5	4	7	5
2	1	2	....	1	2	2	....	3	5	1	2	5	4	4	4
2	3	....	....	4	3	....	....	9	7	....	1	9	7	....	....
....	....	....	....	....	....	....	....	....	1	3	1	1	....	1	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
35	37	14	22	72	68	38	57	127	149	80	65	174	130	93	80
1	1	....	1	3	2	3	5	4	5	12	7	10	5	11	7
....	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

†Three Chinese.

Continued on next page.

GENERAL TABLE

Deaths from All Causes, by Wards, Age, Sex, and Color, Including

WARDS.	Between 30 and 34 Years.				Between 35 and 39 Years.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	9	10	....	....	14	5	....	....
Second	4	6	....	1	12	10	....	....
Third	9	2	4	....	11	2	9	2
Fourth	15	11	6	5	20	8	15	2
Fifth	11	7	7	6	4	5	11	8
Sixth	13	11	5	2	6	5	....	3
Seventh	11	9	1	2	9	8	4	3
Eighth	6	7	1	....	13	7	1	1
Ninth	10	5	2	....	16	5	....	....
Tenth	6	4	4	7	7	5	7	2
Eleventh	3	5	3	5	6	1	7	4
Twelfth	8	9	5	6	12	3	7	5
Thirteenth	6	4	2	....	8	11	....	....
Fourteenth	3	3	5	5	5	2	6	7
Fifteenth	9	8	2	6	11	6	8	1
Sixteenth	5	3	9	3	6	2	10	5
Seventeenth	3	1	9	10	2	3	12	16
Eighteenth	3	7	2	2	5	6	3	2
Nineteenth	7	10	2	3	6	8	2	2
Twentieth	10	9	....	1	10	10	1	....
Twenty-first	9	3	2	3	4	8	3	1
Twenty-second	6	6	3	3	8	....	7	5
Twenty-third	7	4	2	2	2	....	3	1
Twenty-fourth	3	7	1	1	10	6	....	....
Bay View, not in city wards	2	2	4	1	6	1	2	2
Sydenham, not in city wards	....	....	....	....	....	....	....	....
Totals	178	153	81	74	213	127	118	72
Bay View, in city wards	15	7	9	5	28	7	17	8
Sydenham, in city wards	....	....	....	....	....	....	....	....
Mount Wilson, in city wards	....	....	....	....	....	....	....	....

No. 1 (Continued).

Bay View, Sydenham and Mount Wilson Sanatorium, Year 1913.

Between 40 and 44 Years.				Between 45 and 49 Years.				Between 50 and 54 Years.				Between 55 and 59 Years.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
6	5	1	....	11	10	*1	....	17	13	1	1	11	15	1	....
8	7	2	1	18	9	....	....	9	7	1	....	14	8	....	2
9	3	3	2	7	3	3	5	11	5	1	1	9	3	1	2
24	15	12	5	20	11	*8	8	19	14	8	10	16	5	3	1
4	2	5	8	7	1	8	4	4	2	11	14	11	3	4	5
11	3	2	7	16	10	....	1	11	4	2	3	15	11	5	1
15	6	4	6	13	15	3	4	18	8	3	4	21	17	1	1
10	10	2	3	9	9	2	3	19	10	1	1	18	13	....	1
8	7	3	2	11	10	1	2	12	7	2	1	12	12	2	2
11	6	2	....	13	11	3	2	10	4	7	3	12	13	....	2
6	6	8	5	10	2	8	6	7	6	6	12	13	8	4	5
5	9	5	10	8	10	7	6	9	12	4	4	13	12	3	5
7	4	....	1	6	7	....	1	12	9	....	1	14	11	....	....
6	3	4	5	2	4	7	6	12	13	9	4	13	7	7	9
11	7	3	6	15	9	3	7	7	4	4	4	16	10	2	3
12	4	2	2	9	11	7	4	4	8	2	6	8	7	....	3
2	....	32	10	5	5	10	9	5	7	14	9	8	2	10	12
6	9	7	8	8	3	7	3	6	7	5	5	3	6	2	4
8	6	6	3	2	8	3	3	10	8	5	3	13	7	2	1
9	14	....	....	12	12	....	....	13	10	2	....	17	13	....	....
6	9	3	2	13	8	3	4	8	3	3	3	5	4	1	1
6	4	10	7	7	2	8	4	7	4	10	4	5	4	7	6
5	4	5	4	7	6	4	3	8	4	4	2	7	4	2	4
12	8	....	....	10	6	....	....	12	4	....	....	11	9	....	1
5	1	2	5	6	3	6	4	10	3	6	1	9	4	7	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
212	152	123	102	245	185	102	89	260	176	111	96	294	208	64	71
16	7	13	6	19	6	10	6	14	6	11	7	19	4	5	4
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

*Chinese.

Continued on next page.

GENERAL TABLE

Deaths from All Causes, by Wards, Age, Sex, and Color, Including

WARDS.	Between 60 and 64 Years.				Between 65 and 69 Years.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	17	11	1	....	6	7	....	....
Second	7	8	....	....	10	7	1	1
Third	6	8	1	....	6	8	....	....
Fourth	16	10	5	4	19	7	8	1
Fifth	8	3	1	7	5	11	6	3
Sixth	17	9	2	4	12	7	1	1
Seventh	8	15	....	2	16	8	....	3
Eighth	23	15	....	....	16	17	1	2
Ninth	13	10	1	1	17	16	....	....
Tenth	13	14	4	2	16	16	2	1
Eleventh	10	10	4	4	8	7	4	6
Twelfth	12	13	1	....	13	18	2	1
Thirteenth	10	19	1	....	15	17	....	....
Fourteenth	6	12	6	7	10	14	3	5
Fifteenth	11	19	4	3	15	20	4	4
Sixteenth	6	15	3	3	16	16	1	....
Seventeenth	1	3	6	5	3	3	5	7
Eighteenth	6	17	2	4	9	10	3	2
Nineteenth	13	16	3	....	16	17	1	1
Twentieth	11	7	....	....	11	22	....	....
Twenty-first	7	5	5	3	7	5	2	3
Twenty-second	6	6	2	....	8	10	5	3
Twenty-third	6	5	6	1	10	8	....	....
Twenty-fourth	10	8	....	1	3	8	....	....
Bay View, not in city wards	10	2	3	4	11	5	7	....
Sydenham, not in city wards	....	....	....	....	....	....	....	....
Totals	253	260	61	55	278	284	56	44
Bay View, in city wards	12	6	7	3	9	3	4	3
Sydenham, in city wards	....	....	....	....	....	....	....	....
Mount Wilson, in city wards	....	....	....	....	....	....	....	....

No. 1 (Continued).

Bay View, Sydenham and Mount Wilson Sanatorium, Year 1913.

Between 70 and 74 Years.				Between 75 and 79 Years.				Between 80 and 84 Years.				Between 85 and 89 Years.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
8	14	....	1	6	8	....	....	6	8	....	....	3	1	....	....
10	11	....	1	1	5	1	....	4	5	....	....	....	3	....	....
4	7	....	....	3	4	....	....	3	5	....	....	1	....	....	....
11	4	2	1	7	3	2	3	1	7	1	2	3	1	....	1
4	3	5	4	3	2	6	1	1	1	....	2	3	....	....	....
13	20	2	1	6	11	....	....	5	10	1	....	3	5	....	1
14	9	....	1	6	10	....	1	5	9	....	1	3	4	1	....
13	14	....	....	7	17	....	1	4	7	....	....	1	2	....	....
12	13	....	....	6	5	....	....	7	8	....	....	1	6	....	....
14	20	....	1	14	13	1	2	10	9	....	....	3	9	1	....
10	19	1	3	12	10	1	....	4	11	2	....	....	10	....	2
14	14	1	2	7	15	2	....	12	10	....	1	4	3	....	....
15	15	....	1	11	19	....	....	12	9	....	....	....	8	....	....
11	14	3	6	5	11	....	5	3	12	....	1	1	7	....	2
15	14	1	1	9	17	1	1	7	10	2	....	2	3	....	3
11	25	1	2	10	19	1	1	7	6	1	....	2	5	....	....
3	5	3	11	1	5	4	5	4	3	2	2	1	3	1	3
8	8	1	5	8	5	1	....	4	10	....	3	3	2	....	1
9	23	2	1	12	18	1	1	9	13	....	....	1	12	....	....
12	21	1	....	16	13	2	1	6	15	....	....	2	9	....	....
7	8	....	1	1	9	2	....	4	9	....	....	1	....	....	1
10	4	....	2	6	3	....	....	4	2	1	2	2	2	....	....
6	9	....	....	3	10	....	....	....	7	....	1	1	1	....	....
14	6	....	....	2	9	....	....	3	4	....	....	2	1	....	....
14	4	4	3	6	1	1	5	5	2	....	....	....	1	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
262	304	27	48	168	242	26	27	130	192	10	15	43	98	3	15
11	8	2	6	6	5	2	3	2	2	3	3	....	3	1	2
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

Continued on next page.

GENERAL TABLE

Deaths from All Causes, by Wards, Age, Sex and Color, Including Bay

WARDS.	Between 90 and 94 Years.				Between 95 and 99 Years.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	2	....	....	....	1	....	....
Second	....	2	....	....	....	....	....	....
Third	1	2	....	....	1	2	....	....
Fourth	1	....	....	1	....	....	....	....
Fifth	....	....	....	1	....	....	....	1
Sixth	....	2	1	....	....	....	....	....
Seventh	1	1	....	....	....	....	....	....
Eighth	1	1	....	....	....	....	....	....
Ninth	1	2	....	....	....	....	....	....
Tenth	1	3	....	....	....	1	....	....
Eleventh	1	2	....	....	....	1	....	....
Twelfth	....	....	....	1	....	....	....	....
Thirteenth	1	1	....	....	....	....	....	....
Fourteenth	3	2	....	2	....	....	....	....
Fifteenth	....	3	....	....	....	1	....	....
Sixteenth	....	6	....	....	....	....	....	....
Seventeenth	2	....	....	....	....	....	....	1
Eighteenth	....	2	....	....	....	....	....	....
Nineteenth	....	3	....	1	1	....	....	....
Twentieth	1	3	....	....	....	1	....	....
Twenty-first	1	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....
Twenty-third	....	1	....	....	1	....	....	....
Twenty-fourth	1	....	....	....	....	....	....	....
Bay View, not in city wards	....	....	....	....	1	....	....	....
Sydenham, not in city wards	....	....	....	....	....	....	....	....
Totals	16	38	1	6	4	7	....	2
Bay View, in city wards	....	....	....	....	....	....	....	....
Sydenham, in city wards	....	....	....	....	....	....	....	....
Mount Wilson, in city wards	....	....	....	....	....	....	....	....

No. 1 (Continued).

View, Sydenham and Mount Wilson Sanatorium, Year 1913.

Between 100 and 109 Years.				Totals.				
White.		Colored.		White.		Colored.		Grand Total.
M.	F.	M.	F.	M.	F.	M.	F.	
....	....	....	....	237	204	7	4	452
....	....	....	....	193	173	6	15	387
....	....	....	....	175	116	35	24	350
....	....	....	....	253	138	133	91	615
....	....	....	....	102	73	95	94	364
....	....	....	....	185	182	42	45	454
....	....	....	....	225	202	46	47	520
....	1	....	....	218	215	26	23	482
....	....	....	....	183	163	19	12	377
....	1	....	....	176	159	42	34	411
....	....	....	....	106	108	88	91	393
....	....	....	....	158	162	67	71	458
....	....	....	....	170	186	8	10	374
....	....	....	....	191	213	96	136	636
....	....	....	....	180	171	87	90	528
....	....	....	....	141	152	79	78	450
....	....	1	....	55	48	209	176	488
....	....	....	....	137	156	64	68	425
....	....	....	....	168	211	47	35	461
....	....	....	....	201	237	13	4	455
....	....	....	....	146	119	49	39	353
....	....	....	....	110	70	90	72	342
....	....	....	....	119	107	46	31	303
....	....	....	....	236	203	2	4	445
....	....	....	....	86	31	46	29	192
....	....	....	....	....	1	....	....	1
....	2	1	....	4,151	3,800	1,442	1,323	10,716
....	....	....	....	169	77	110	76	432
....	....	....	....	12	7	....	....	19
....	....	....	....	16	11	5	13	45

Average Age at Death, White and Colored, Years 1912 *and* 1913

	Total Deaths.	Total Ages.	Average Age at Death.
1912.			
White	7,835	313,898.79	40.062
Colored	2,606	78,995.52	30.312
1913.			
White	7,951	310,492.82	39.057
Colored	2,765	85,448.76	30.903

GENERAL

Deaths of Children Under Five Years

WARDS.	Under 1 Month.				Bet. 1 and 3 Mos.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	23	19	....	....	6	7	....	....
Second	19	12	....	....	12	7	1	....
Third	20	9	1	4	12	3	1	....
Fourth	18	9	4	4	3	1	8	1
Fifth	9	7	3	4	3	3	1	....
Sixth	11	14	4	4	5	2	3	3
Seventh	21	15	7	6	8	5	1	1
Eighth	14	8	4	5	6	8	3	1
Ninth	12	12	....	1	4	6	....	1
Tenth	5	9	1	3	2	2	....	3
Eleventh	4	2	9	4	2	1	2	2
Twelfth	†12	10	8	2	2	....	1	5
Thirteenth	8	11	....	....	9	5	1	1
Fourteenth	18	21	11	15	43	40	1	7
Fifteenth	9	6	9	10	1	4	8	5
Sixteenth	12	3	10	9	2	....	2	1
Seventeenth	3	3	21	12	4	1	8	9
Eighteenth	12	11	4	1	13	9	3	4
Nineteenth	16	15	3	3	4	6	....	....
Twentieth	17	11	3	....	5	5	....	....
Twenty-first	13	4	2	1	8	5	2	....
Twenty-second	6	5	6	3	1	3	1	2
Twenty-third	16	11	4	2	7	....	1	3
Twenty-fourth	13	16	....	....	8	12	....	....
Bay View, not in wards	....	....	....	1	....	1	....	....
Sydenham, not in wards	....	....	....	....	....	....	....	....
Total	311	243	114	94	170	136	48	49

†Sex unknown.

TABLE No. 2.

of Age in Each Ward, Year 1913.

Bet. 3 and 12 Mos.				Bet. 1 and 2 Yrs.				Bet. 2 and 3 Yrs.				Bet. 3 and 4 Yrs.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
33	31	....	1	26	8	1	1	7	3	....	....	3	1	....	....
34	21	....	5	12	10	....	1	3	5	....	....	2	1	....	....
18	14	2	2	10	10	....	1	3	8	1	1	2	....	....	....
8	5	17	8	5	3	7	5	2	2	2	3	....	1	2	1
6	6	10	5	4	4	2	3	1	1	....	1	....	....	....	....
12	11	7	3	6	8	3	2	....	5	....	1	2	2	....	....
18	11	2	2	7	9	5	2	2	2	....	1	2	2	....	....
11	15	3	1	5	7	....	....	6	6	1	1	2	4	....	....
6	9	1	....	4	2	1	....	2	2	....	....	2	3	....	....
8	6	5	1	10	1	....	....	....	1	....	....	1	1	....	....
2	....	8	8	....	....	2	2	....	....	1	1	....	....	....	....
5	7	9	3	4	1	2	5	1	1	1	1	....	....	1	1
9	12	1	3	8	3	....	....	....	....	....	2	1	....	....	....
30	28	11	11	7	7	3	8	1	2	2	5	2	....	2	....
11	7	15	8	7	1	6	7	1	1	1	1	....	1	2	1
6	4	10	11	3	1	4	8	1	3	2	1	1	1	1	....
3	1	18	13	....	2	8	8	....	....	3	4	....	....	....	....
16	18	6	7	4	5	2	3	2	4	3	1	2	1	....	2
13	12	2	4	11	4	2	1	2	....	2	....	2	2	2	....
14	17	2	....	5	2	1	....	2	9	....	....	3	....	....	....
19	15	7	1	6	2	3	1	2	1	2	....	....	1	....	....
11	4	4	6	3	1	3	2	2	4	1	1	1	....	....	2
7	13	2	....	4	1	2	1	2	1	1	....	2	....	....	....
50	29	1	....	19	26	....	....	13	9	....	....	4	5	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
350	296	143	103	170	119	57	61	55	70	23	25	34	26	10	7

Continued on next page

GENERAL TABLE No. 2—*Continued.*

Deaths of Children Under Five Years of Age in Each Ward, Year 1913.

WARDS.	Bet. 4 and 5 Yrs.				Total.				Grand Total
	White.		Colored.		White.		Colored.		
	M.	F.	M.	F.	M.	F.	M.	F.	
First	....	1	....	....	98	70	1	2	171
Second	....	1	....	....	82	57	1	6	146
Third	1	2	....	....	66	46	5	8	125
Fourth	2	....	4	1	38	21	44	23	126
Fifth	....	....	....	1	23	21	16	14	74
Sixth	....	....	....	....	36	42	17	13	108
Seventh	1	2	1	....	59	46	16	12	133
Eighth	3	1	....	....	47	49	11	8	115
Ninth	....	1	....	1	30	35	2	3	70
Tenth	2	1	1	....	28	21	7	7	63
Eleventh	....	....	1	....	8	3	23	17	51
Twelfth	....	....	....	1	24	19	22	18	83
Thirteenth	....	1	....	....	35	32	2	6	75
Fourteenth	....	....	3	....	101	89	33	46	278
Fifteenth	2	1	1	1	31	21	42	33	127
Sixteenth	2	1	....	....	27	13	29	30	99
Seventeenth	....	....	1	....	10	7	59	46	122
Eighteenth	1	2	....	....	50	50	18	18	136
Nineteenth	....	2	....	2	48	41	11	10	110
Twentieth	....	4	....	....	46	48	6	....	100
Twenty-first	2	2	1	1	50	30	17	4	101
Twenty-second	....	....	2	....	24	17	17	16	74
Twenty-third	4	1	1	1	42	27	11	7	87
Twenty-fourth	2	4	....	....	109	101	1	....	211
Bay View, not in wards	....	....	....	....	....	1	....	1	2
Sydenham, not in wards	....	....	....	....	....	1	....	....	1
Total	22	27	16	9	1112	917	411	348	2788

TUBERCULOSIS.

TABLE NO. 1.—*Total Death Rate and Death Rates for White and Colored Population, Based on Census of* 1910, *from* 1903 *to* 1913, *Inclusive.*

YEAR.	*Estimated Population.	Total Deaths.	Death Rate per 1,000 of Population.	White. No. of Deaths.	White. Death Rate per 1,000.	Colored. No. of Deaths.	Colored. Death Rate per 1,000.	Chinamen.
1903	524,407	1,323	2.523	906	2.045	416	5.109	1
1904	529,423	1,473	2.781	1,022	2.283	451	5.502	...
1905	534,439	1,423	2.662	940	2.079	482	5.842	1
1906	539,455	1,461	2.704	988	2.164	470	5.659	3
1907	544,471	1,441	2.647	950	2.061	490	5.862	1
1908	549,497	1,379	2.509	926	1.989	453	5.385	...
1909	554,513	1,403	2.530	909	1.934	491	5.799	3
1910	559,529	1,385	2.475	885	1.866	478	5.610	2
1911	564,547	1,344	2.381	846	1.765	497	5.795	1
1912	569,561	1,346	2.363	866	1.791	480	5.575	...
1913	574,577	1,345	2.514	837	1.716	507	5.850	1

*Corrected to July 1 of each year, according to census of 1910.

TUBERCULOSIS (ALL FORMS).

TABLE NO. 2—*Deaths Due to Tuberculosis Each Month in the Year* 1913, *by Sex and Color.*

MONTHS.	Sex.		Color.		Total.
	Male.	Female.	White.	Colored.	
January	77	58	77	58	135
February	61	55	75	41	116
March	87	48	83	52	135
April	70	45	74	41	115
May	88	56	85	59	144
June	66	50	72	44	116
July	54	49	51	52	103
August	55	48	64	39	103
September	55	41	72	24	96
October	54	38	59	33	92
November	49	48	61	36	97
December	63	30	64	29	93
Total	779	566	837	508	1,345

TUBERCULOSIS.

Table No. 3—*Deaths Due to Tuberculosis, Arranged According to Occupation, Year* 1913.

Actors	1	Druggists	3
Agents (commission)	2	Dentists	1
Agents (real estate)	1	Domestics	118
Agents (not specified)	2	Electrical workers	2
Brewers	3	Enamel workers	2
Bakers	3	Engineers (stationary engine)	1
Barbers	7	Elevator boys	4
Bartenders	2	Flowermakers	1
Brokers (commercial)	1	Foremen	1
Boilermakers	3	Furniture movers	1
Butchers	5	Fruit dealers	1
Builders and contractors	6	Fish dealers	1
Brassworkers	2	Factory hands	12
Blacksmiths	7	Farmers	5
Basketmakers	1	Farm laborers	4
Boxmakers	1	Firemen (stationary engine)	5
Bootblacks	5	Florists	1
Bookkeepers, clerks	43	Grocers	3
Broommakers	1	Glassblowers	4
Bookbinders	1	Harnessmakers	1
Canvassers	1	Housewives	168
Carpenters	8	Hodcarriers	1
Chambermaids	5	Hucksters	11
Cementworkers	1	Hostlers	7
Chefs	1	Inspectors	2
City employees	1	Ironworkers	3
Confectioners	1	Jobbers	6
Candymakers	1	Jewelers (dealers)	2
Cabinetmakers	1	Laborers	179
Collectors	1	Launderers and laundresses	20
Coachmen	2	Laundry workers (steam)	3
Clergymen	1	Livery stable keepers	1
Canmakers	3	Machinists	10
Cigarmakers	4	Marble polishers	1
Commercial travelers	1	Manufacturers	1
Cooks	16	Moulders	3
Conductors (not specified)	2	Merchants	7
Coopers	1	Metal workers	2
Cutters	3	Messengers	1
Cloth pressers	3	Mill hands	2
Designers	3	Mariners	1
Drivers	36	Ministers	1
Dressmakers and seamstresses	13	Music teachers	1
Dairymen	2	Nurses	3
Draftsmen	2	Newspaper carriers	1

TUBERCULOSIS.

TABLE NO. 3 (Continued)—*Deaths Due to Tuberculosis, Arranged According to Occupation, Year* 1913.

Oyster shuckers	1	Stone masons	1
Oilers (not specified)	1	Shirt factory hands	4
Oystermen	1	Shoemakers	12
Operators	2	Sewing machine operators	1
Painters	7	Ship carpenters	1
Patternmakers	1	Storekeepers	4
Packers	2	Servants	8
Pavers	2	Secretaries	1
Paperhangers	4	Steamfitters	5
Peddlers	1	Stenographers	4
Physicians	1	Stevedores	9
Plumbers	11	School children	25
Policemen and watchmen	3	Spinners	1
Postoffice employees	1	Tailors or tailoresses	11
Produce dealers	1	Teamsters	8
Prizefighters	1	Teachers	2
Porters	11	Tinners	2
Potters	3	Traveling salesmen	1
Printers and engravers	12	Tobacco workers	1
Religieuse	2	Upholsterers	2
Restaurantkeepers	1	Undertakers	4
Saloonkeepers	3	Varnishers	1
Salesmen	15	Waiters	19
Saleswomen	4	Waitresses	1
Street cleaners	1	Wheelwrights	1
Seamen	18	Whitewashers	3
Steam railway employees	11	Woodworkers	3
Straw hat makers	3	No occupation	264
Street railway employees	4		

Social Condition.

Single	652	Divorced	6
Married	534	Unknown	15
Widows	76		
Widowers	62	Total	1,345

TUBERCULOSIS.

TABLE NO. 4—*Deaths According to Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	1	....	....	....	3	3	....	....
Second	2	2	....	....	....	1	....	....
Third	2	1	1	2	1	....	1	1
Fourth	2	1	†4	3	2	4	3	3
Fifth	....	....	4	3	1	....	....	2
Sixth	4	....	....	....	1	3	1	....
Seventh	4	1	....	1	4	2	....	....
Eighth	2	2	....	....	2	2	2	....
Ninth	3	3	1	....	4	2	....	....
Tenth	3	....	4	1	2	2	1	2
Eleventh	....	1	2	1	2	....	....	1
Twelfth	....	2	2	2	1	1	2	2
Thirteenth	1	2	....	....	1	....	....	....
Fourteenth	....	3	2	....	....	....	1	4
Fifteenth	4	2	1	....	1	....	1	1
Sixteenth	1	1	2	....	4	1	1	1
Seventeenth	1	....	5	3	....	....	3	1
Eighteenth	1	5	1	1	....	2	1	1
Nineteenth	5	4	2	1	....	1	....	2
Twentieth	1	2	....	....	3	1	....	....
Twenty-first	....	1	....	1	2	4	....	....
Twenty-second	1	....	2	....	2	1	2	....
Twenty-third	....	....	....	2	1	2	....	....
Twenty-fourth	2	2	....	....	2	1	....	....
Bay View, not in wards	1	1	3	1	2	1	1	....
Sydenham	....	....	....	....	....	....	....	....
Total	41	36	36	22	41	34	20	21
Bay View, in wards	11	....	6	3	9	3	7	4
*Sanatoria, not included in above table	5	1	....	....	4	2	....	....

*For analysis see special table. †Chinese.

TUBERCULOSIS.

Sex, Color and Calendar Months, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
4	....	....	....	....	....	....	....	2	3	....	....	1	1	....	....
2	1	....	....	2	....	....	....	....	1	....	....	3	3	2	....
1	....	2	1	1	1	....	1	1	....	1	....	3	2	1	1
3	1	4	1	2	3	3	....	8	2	1	1	2	4	1	2
2	....	3	....	2	....	2	1	....	1	4	2	1	....	2	2
1	1	1	....	3	....	2	1	1	....	....	2	1	1	1	1
3	2	1	....	3	1	....	....	4	3	1	2	1	2	....	....
2	2	....	1	4	3	1	....	6	5	....	....	2	1	1	....
6	....	....	....	4	1	1	....	3	1	....	....	2	2	....	....
....	2	1	....	1	1	....	1	4	2	3	....	3	....	....	1
....	1	....	1	....	1	2	2	2	....	2	2	2	....	2	....
....	1	3	2	1	....	....	1	1	1	....	1	2	....	....	1
....	3	....	....	1	....	1	....	2	2	1	....	2	1	....	....
2	....	4	1	1	1	....	1	1	1	3	....	2	....	....	2
4	1	1	4	3	3	1	1	2	1	1	3	1	....	3	1
2	....	1	2	1	1	2	2	3	....	1	3	....	1	1	....
....	....	4	4	3	....	4	4	1	....	1	2	....	....	2	3
2	1	1	....	1	1	....	2	1	1	2	1	2	2	2	3
2	3	4	....	2	4	....	....	2	....	1	....	3	3	1	1
2	5	....	....	3	4	1	....	....	....	....	....	1	1	....	....
4	1	....	....	5	1	1	1	1	2	1	3	2	3	....	1
4	....	3	1	5	....	1	....	1	1	3	2	1	....	1	1
1	2	....	....	....	....	....	....	1	1	2	1	1	....	1	1
5	3	....	....	....	....	....	....	3	3	....	....	4	2	....	....
1	....	1	....	....	....	....	1	4	....	6	....	1	....	2	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
53	30	34	18	48	26	22	19	54	31	34	25	43	29	23	21
6	2	6	3	5	3	10	3	10	2	7	7	15	3	5	6
2	....	....	....	4	2	....	....	5	5	....	....	4	5	....	....

Continued on next page.

TUBERCULOSIS.

TABLE NO. 4 (Continued)—*Deaths According to Wards,*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	3	....	....	....	3	....	....	....	2	....	....
Second	2	1	....	1	2	1	....	....	3	....	....	....
Third	....	....	....	1	3	....	....	1	2	2	1	1
Fourth	2	....	1	2	3	....	2	4	4	1	1	1
Fifth	3	....	2	1	....	1	2	3	3	....	....	....
Sixth	....	1	....	3	3	1	....	....	4	....	1	....
Seventh	2	1	1	2	3	3	....	1	6	2	....	....
Eighth	....	3	....	....	1	3	....	....	1	3	....	....
Ninth	1	....	1	....	....	1	....	....	3	....	....	....
Tenth	3	4	1	1	3	2	1	1	....	....	1	1
Eleventh	....	....	2	1	2	....	1	....	....	....	1	3
Twelfth	3	2	....	1	5	4	1	....	2	1	....	1
Thirteenth	1	....	....	....	1	1	....	....	1	....	....	....
Fourteenth	....	2	3	3	2	....	....	2	....	2	1	1
Fifteenth	....	....	2	....	....	3	1	1	2	1	....	....
Sixteenth	....	....	1	1	1	1	2	2	....	1	....	1
Seventeenth	....	2	5	3	....	....	4	1	....	1	2	1
Eighteenth	1	2	2	....	2	1	2	....	4	4	1	....
Nineteenth	....	2	2	1	....	....	....	2	1	1	....	....
Twentieth	3	2	....	....	2	....	1	....	2	3	1	1
Twenty-first	....	....	2	....	....	2	1	1	4	2	....	....
Twenty-second	....	....	2	3	1	....	2	....	....	....	1	1
Twenty-third	1	....	1	....	....	1	....	....	1	1	....	....
Twenty-fourth	2	....	....	....	....	1	....	....	....	1	....	....
Bay View, not in wards	2	....	....	....	1	....	....	....	1	....	....	1
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	26	25	28	24	35	29	20	19	44	28	11	13
Bay View, in wards	4	4	7	2	13	4	10	4	11	2	4	1
*Sanatoria, not included in above table	5	2	....	....	6	1	....	....	1	1	....	....

*For analysis see special table.

TUBERCULOSIS.

Sex, Color and Calendar Months, Year 1913.

October.				November.				December.				Total.			
White		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
2	2	....	....	2	4	....	....	3	2	....	....	18	23	....	....
2	....	....	1	3	4	....	....	3	1	....	....	24	15	2	2
1	....	....	....	2	1	1	....	1	2	1	....	18	9	9	9
1	1	....	1	2	1	2	....	4	1	....	1	35	19	22	19
....	1	3	....	....	1	2	3	1	1	1	1	13	5	25	18
2	1	....	....	3	2	....	1	5	....	....	2	28	10	6	10
1	....	2	1	....	3	....	....	2	2	1	....	33	22	6	7
4	4	....	....	3	2	....	....	1	1	....	....	28	31	4	1
2	1	1	....	....	1	....	....	4	....	....	2	32	12	4	2
1	2	1	....	....	1	1	1	1	....	1	2	21	16	15	11
....	....	....	1	1	....	....	....	....	....	1	.,..	9	3	13	12
3	....	1	1	....	1	2	....	3	1	2	1	21	14	13	13
2	3	1	1	....	....	....	....	3	....	....	1	15	12	3	2
1	2	2	1	....	....	2	1	1	....	1	....	10	11	19	16
....	1	1	1	1	1	2	1	2	1	2	1	20	14	16	14
1	1	2	....	3	2	....	2	....	....	1	1	16	9	14	15
....	....	3	1	1	....	2	3	1	....	3	....	7	3	38	26
1	....	....	1	1	....	2	1	....	1	....	1	16	20	14	11
1	....	....	....	1	1	....	....	2	....	....	....	19	19	10	7
1	1	....	....	2	3	....	....	1	....	....	....	21	22	3	1
....	1	....	1	1	....	....	2	1	1	....	....	20	18	5	10
2	....	2	1	1	3	2	....	1	....	1	....	19	5	22	9
1	1	1	....	....	1	3	....	3	1	....	....	10	10	8	4
3	1	....	....	....	1	....	....	3	1	....	1	24	16	....	1
2	2	....	1	1	....	....	....	2	....	....	....	18	4	13	4
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
34	25	20	13	28	33	21	15	48	16	15	14	495	342	284	224
4	2	3	....	2	2	8	3	7	4	1	2	97	31	74	38
5	2	....	....	5	3	....	....	2	....	....	....	48	24	....	....

TUBERCULOSIS.

TABLE No. 5—*Deaths by Ages, Sex, Color and Average*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos	....	....	1	....	....	2	....	....
Bet. 1 and 2 yrs	1	1	....	....	....	....	....	2
Bet. 2 and 3 yrs	1	....	....	....	....	....	1	1
Bet. 3 and 4 yrs	....	....	....	1	....	....	....	1
Bet. 4 and 5 yrs	....	1	....	1	....	....	....	1
Bet. 5 and 9 yrs	1	....	2	1	....	....	1	1
Bet. 10 and 14 yrs	....	....	....	....	....	1	1	....
Bet. 15 and 19 yrs	1	2	....	....	1	4	1	2
Bet. 20 and 24 yrs	4	6	4	5	3	7	3	2
Bet. 25 and 29 yrs	7	6	4	2	9	4	1	1
Bet. 30 and 34 yrs	4	5	3	4	5	6	1	4
Bet. 35 and 39 yrs	7	5	3	1	4	2	4	3
Bet. 40 and 44 yrs	3	....	7	3	4	3	4	1
Bet. 45 and 49 yrs	4	1	5	3	5	1	2	1
Bet. 50 and 54 yrs	3	1	5	....	1	....	....	....
Bet. 55 and 59 yrs	2	2	....	....	5	....	1	....
Bet. 60 and 64 yrs	2	1	2	1	1	2	....	....
Bet. 65 and 69 yrs	1	1	....	....	2	....	....	....
Bet. 70 and 74 yrs	....	2	....	....	1	2	....	....
Bet. 75 and 79 yrs	....	2	....	....	....	....	....	1
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	41	36	36	22	41	34	20	21

TUBERCULOSIS.

Age at Death, and Social Condition, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	....	1	....	....	....	....	....	1	....	....	1	....
1	1	1	....	1	1	....	1	1	1	2	1	....	1	....	....
....	....	....	1	1	....	....	1	....	2	1	....	3	1	....	2
1	....	1	1	....	....	....	1	....	....	....	....	....	1	1	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	2	....	1	....	....	....	....	....	1	2	....	....	....	....
1	1	1	....	....	2	....	....	....	2	1	3	....	....	2	1
2	....	....	2	1	....	....	1	....	....	1	1	....	....	....	....
1	....	1	4	6	1	1	5	1	....	3	6	3	2	1	....
4	5	4	3	4	5	7	2	5	9	....	2	3	4	3	3
5	2	4	3	3	5	2	....	8	3	3	6	4	1	4	2
11	1	3	1	7	....	6	1	7	1	6	....	3	4	3	5
8	2	3	....	5	1	2	2	6	3	3	....	9	5	2	1
4	6	....	2	1	3	....	1	6	2	5	1	7	3	2	2
5	3	4	....	5	2	1	2	5	2	5	1	4	1	....	2
5	4	3	....	3	....	....	1	3	3	1	....	2	3	3	1
3	....	3	....	3	....	1	1	1	2	....	....	2	....	....	1
1	1	3	....	4	2	....	....	6	....	1	....	2	3	....	1
1	....	1	1	3	1	1	....	3	....	1	....	....	....	....	....
....	3	....	....	....	....	....	....	2	1	....	....	1	....	....	....
....	....	....	....	....	1	1	....	....	....	....	....	....	....	1	....
....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
53	30	34	18	48	26	22	19	54	31	34	25	43	29	23	21

Continued on next page.

TUBERCULOSIS.

TABLE No 5 (Continued)—*Deaths by Ages, Sex, Color and*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month....	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos...	....	....	....	....	1	....	....	....	....	....	....	....
Bet. 3 and 12 mos...	....	2	2	2	1	1	....	....	2	2	1	....
Bet. 1 and 2 yrs...	2	3	....	1	....	....	1	1	....	....	....	....
Bet. 2 and 3 yrs...	1	....	....	1	....	1	....	1	....	....	....	....
Bet. 3 and 4 yrs...	2	....	....	....	....	1	....	....	....	....	....	....
Bet. 4 and 5 yrs...	....	....	1	....	....	1	....	....	....	....	....	....
Bet. 5 and 9 yrs...	....	....	1	3	....	1	....	1	....	....	1	1
Bet. 10 and 14 yrs...	....	....	....	....	....	1	....	2	....	....	....	....
Bet. 15 and 19 yrs...	....	1	3	2	1	1	1	....	3	1	1	1
Bet. 20 and 24 yrs...	1	4	8	3	1	1	2	1	3	3	2	4
Bet. 25 and 29 yrs...	3	2	2	4	3	2	2	4	2	4	....	3
Bet. 30 and 34 yrs...	2	3	1	....	2	4	1	2	6	3	1	1
Bet. 35 and 39 yrs...	3	4	4	1	5	5	5	3	10	4	2	....
Bet. 40 and 44 yrs...	1	....	....	1	4	2	4	2	3	2	2	2
Bet. 45 and 49 yrs...	4	2	....	2	2	2	3	....	7	1	....	1
Bet. 50 and 54 yrs...	4	2	1	2	8	1	....	....	1	2	1	....
Bet. 55 and 59 yrs...	2	....	2	1	4	....	1	2	2	....	....	....
Bet. 60 and 64 yrs...	....	....	1	....	1	....	....	....	3	4	....	....
Bet. 65 and 69 yrs...	....	1	1	....	1	2	....	....	1	2	....	....
Bet. 70 and 74 yrs...	....	1	1	1	1	1	....	....	1	....	....	....
Bet. 75 and 79 yrs...	1	....	....	....	....	1	....	....	....	....	....	....
Bet. 80 and 84 yrs...	....	....	....	....	....	1	....	....	....	....	....	....
Bet. 85 and 89 yrs...	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs...	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs...	....	....	....	....	....	....	....	....	....	....	....	....
Total........	26	25	28	24	35	20	20	19	44	28	11	13

TUBERCULOSIS.

Average Age at Death, and Social Condition, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	1	....	....	....	2	2	1	1
1	....	1	....	....	1	2	1	2	....	....	1	9	12	10	6
2	1	....	....	....	....	....	....	....	....	1	1	9	8	3	9
....	....	....	....	....	1	....	....	....	....	....	....	3	3	3	5
....	....	....	....	....	....	....	....	1	....	....	....	3	2	....	2
....	....	1	....	....	....	....	....	....	....	....	....	1	2	5	4
....	1	....	2	....	2	....	....	....	....	1	....	2	9	10	13
....	....	....	....	1	....	....	....	....	....	....	....	4	2	2	6
....	3	2	3	....	3	....	2	1	2	1	3	18	20	15	28
2	3	1	....	4	3	1	3	3	4	....	2	37	54	35	30
4	3	2	....	1	7	1	3	3	3	1	4	52	42	26	32
7	2	5	2	1	3	2	1	8	2	1	2	63	34	33	23
4	2	3	4	4	5	2	1	6	2	2	....	71	40	35	16
5	3	1	....	5	2	9	2	7	1	5	....	50	27	39	17
2	1	....	1	5	3	3	....	4	1	1	....	52	20	24	13
2	....	2	1	....	1	....	1	6	....	....	....	38	17	16	6
....	2	....	....	3	1	....	....	2	....	1	1	29	7	9	6
2	....	2	....	1	....	1	1	....	....	....	....	23	13	10	3
1	1	....	....	2	1	....	....	2	1	1	....	17	10	5	1
....	3	....	....	1	....	....	....	1	....	....	....	8	13	1	1
1	....	....	....	....	....	....	....	1	....	....	....	3	4	2	1
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
34	25	20	13	28	33	21	15	48	16	15	14	495	342	284	224

TUBERCULOSIS.

TABLE NO. 5 (Continued)—*Average Age at Death.*

	White.	Colored.	Total Deaths.
All ages	36,386	30,706	1,345
Five years and under	1,500	1,954	106
Five to nineteen years, inclusive	15,349	14,506	140
Twenty years and over	40,928	37,967	1,099
Single	27,803	22,899	652
Married	41,089	38,039	534
Widows	55,006	44,810	77
Widowers	52,129	49,550	61
Divorced	38,665	34,040	6
Unknown social condition	41,333	47,888	15

TUBERCULOSIS.

TABLE NO. 6—*Deaths Each Month from Pulmonary Tuberculosis*

MONTHS.	1900		1901		1902		1903		1904		1905	
	W.	C.	W.	C.	W.	C.	W.	C.	W.	C.	W.	C.
January...........	56	20	91	27	72	29	69	33	83	37	70	41
February.........	54	32	69	22	46	26	67	24	105	37	58	25
March............	75	39	79	33	69	31	74	35	94	40	77	26
April.............	48	36	62	38	78	36	79	36	85	44	75	42
May..............	55	25	55	38	69	48	60	40	75	49	75	40
June..............	52	24	62	23	56	44	64	26	73	32	75	31
July..............	55	26	65	28	48	24	60	37	69	41	56	49
August...........	69	24	56	30	72	18	53	34	62	31	54	33
September........	50	37	60	31	69	37	70	22	69	42	70	31
October...........	67	22	58	30	65	27	64	28	67	34	56	33
November........	72	21	60	25	75	24	71	31	70	27	76	36
December.........	70	27	64	32	62	34	81	29	62	21	69	38
Totals........	723	333	781	357	781	378	811	375	914	435	811	425

TUBERCULOSIS.

According to Color, from 1900 *to* 1913, *Inclusive.*

1906		1907		1908		1909		1910		1911		1912		1913	
W.	C.	W.	C.	W.	C.	W.	C.	W.	C.	W.	C.	W.	C.	W.	C.
63	27	105	47	101	39	78	45	72	39	81	33	88	32	77	58
97	22	98	40	70	37	68	39	74	41	77	51	91	36	75	41
84	41	106	62	95	40	98	51	98	39	88	45	87	46	83	52
72	32	72	41	83	56	94	51	81	48	82	37	85	44	74	41
68	36	76	43	80	34	76	33	73	46	76	57	72	47	85	59
64	28	75	39	72	33	60	35	60	34	71	52	58	45	72	44
62	40	64	43	85	52	57	42	73	44	59	37	75	47	51	52
48	34	76	37	80	32	88	41	64	44	56	42	57	25	64	39
62	25	60	28	51	36	65	46	77	31	61	29	51	30	72	24
83	42	73	32	67	34	73	46	63	40	61	40	63	56	59	33
84	40	65	26	68	28	72	27	77	36	62	35	79	33	61	36
93	48	81	51	74	32	80	35	73	38	72	40	60	39	64	29
880	415	951	489	926	453	909	491	885	480	846	498	866	480	837	508

TUBERCULOSIS.

TABLE NO. 7—*Deaths Due to Tuberculosis of City Residents at Sabillasville, Year* 1913.

MONTH.	ADDRESS.	White.		Age.		
		Male.	Female.	Years.	Months.	Days.
January	1336 Chester St.	......	1	20	.....	....
January	1309 Harford Ave.	1	......	23	10	8
January	878 W. Fayette St.....	1	......	24	2	14
January	2044 Orleans St.	1	......	16	5	6
January	1238 Greenmount Ave...	1	......	22	5	3
February	920 W. Lombard St...	1	......	34	7	7
February	441 Colvin St.	1	......	29	1	20
February	1800 Fleet St.	1	......	39	2	20
February	1436 Patapsco St.	1	......	21	2	....
February	1509 Battery Ave.	......	1	19	10	15
March	1127 Low St.	1	......	25	10	19
April	1928 W. Mulberry St. ..	1	......	25	7	26
April	503 W. Saratoga St...	......	1	24	11	....
April	1313 E. Eager St.......	1	......	22	9	29
April	1038 Light St.	......	1	49	9	24
April	111 N. Lakewood Ave.	1	......	18	11	19
May	316 S. Chester St......	......	1	31	6	4
May	2221 Wilkens Ave.	1	......	25	.....	....
May	1331 Mt. Royal Ave....	......	1	47	6	17
May	512 Belnord Ave.	1	......	24	11	7
May	900 N. Stricker St.....	......	1	45	3	22
May	1713 E. Federal St.....	1	......	33	6	18
June	3501 Chestnut Ave.	......	1	26	6	....
June	1004 Somerset St.	......	1	16	5	17
June	343 S. Chester St......	......	1	25	5	....
June	441 Lorraine Ave.	......	1	62	9	11
June	916 Hollins St.	1	......	24	6	22
June	646 Columbia Ave.	1	......	20	5	6
June	921 N. Caroline St....	......	1	21	4	18
July	500 N. Central Ave....	1	......	43	4	23
July	922 S. Paca St........	1	......	34	.....	29
July	1305 Myrtle Ave.	......	1	43	9	13
July	3310 Guilford Ave.	......	1	23	.....	27
July	860 W. Lexington St..	1	......	29	9	27
July	1615 Westwood Ave. ..	1	......	48	9	6
July	2034 W. Fayette St....	1	......	37	2	26
August	1405 Ashland Ave.	......	1	33	10	21
August	2215 Gough St.	1	......	18	10	....

TUBERCULOSIS.

TABLE NO. 7 (Continued)—*Deaths Due to Tuberculosis of City Residents at Sabillasville, Year* 1913.

MONTH.	ADDRESS.	White.		Age.		
		Male.	Female.	Years.	Months.	Days.
August	307 N. Pine St.	1	......	42	.....	....
August	1933 E. Monument St.	1	......	29	.....	....
September	3610 Foster Ave.	1	......	47	.....	....
October	2405 E. Lafayette Ave.	1	......	30	3	21
October	11 S. Chapel St.	1	......	29	3	21
October	1017 Edmondson Ave.	......	1	26	9	2
October	2207 Guilford Ave.	1	......	61	8	30
October	1917 Gough St.	......	1	18	.....	....
October	26 N. Bentalou St.	1	......	59	.....	....
November	915 Woodley St.	......	1	32	4	5
November	17 Lloyd St.	......	1	15	7	16
November	2643 N. Charles St.	1	......	37	2	16
November	517 E. Twentieth St.	1	......	40	10	4
November	209 W. Franklin St.	1	......	47	.....	23
November	1414 E. Lombard St.	1	......	18	1	20
November	201 N. Ellwood Ave.	......	1	42	10	23
December	1222 Madison Ave.	1	......	52	.....	....
December	304 Walbrook Ave.	1	......	33	.....	....
Total	....	36	20	....	.....	....

TUBERCULOSIS.

TABLE No. 8—*Deaths Due to Tuberculosis of City Residents at Eudowood, Year* 1913.

MONTH.	ADDRESS.	White.		Age.		
		Male.	Female.	Years.	Months.	Days.
January	516 Union Ave.	1	......	25	3	25
February	700 N. Glover St......	......	1	35	6	7
March	3121 Fait Ave.	1	......	17	1	8
May	1805 N. Castle St.......	1	......	38	5	19
May	412 N. Washington St.	1	......	32	7	22
May	118 Albemarle St.	......	1	25	7	22
May	1641 E. Oliver St.......	......	1	60	6	19
August	2335 Oliver St.	1	......	69	6	15
August	2005 Dennison St.	1	......	36	9	21
September	1746 Harford Ave.	......	1	31	.....	....
October	2929 E. Baltimore St....	1	......	28	.....	....
November	3626 Park Heights Ave.	1	......	28	1	9
Total........	....	8	4	.....	.....	....

TUBERCULOSIS.

TABLE No. 9—*Deaths Due to Tuberculosis of City Residents at Jewish Home, Year* 1913.

MONTH.	ADDRESS.	White.		Age.		
		Male.	Female.	Years.	Months.	Days.
April	1452 Light St..........	1	......	66	7	20
June	1315 E. Lombard St....	1	......	45	.....	....
June	2211 E. Lombard St....	1	......	43	.....	....
August	118 Albemarle St.	1	......	62	.....	....
Total........	....	4	......	.....	.....	....

PNEUMONIA (LOBAR).

TABLE NO. 1.—*Total Death Rate and Death Rates for White and Colored Population, Based on Census of* 1910, *from* 1903 *to* 1913, *Inclusive.*

YEAR.	*Estimated Population.	Total Deaths.	Death Rate per 1,000 of Population.	White. No. of Deaths.	White. Death Rate per 1,000.	Colored. No. of Deaths.	Colored. Death Rate per 1,000.
1903...............	524,407	789	1.506	518	1.169	271	3.328
1904...............	529,423	892	1.685	587	1.312	305	3.721
1905...............	534,439	800	1.497	530	1.172	270	3.272
1906...............	539,455	696	1.290	445	0.975	251	3.022
1907...............	544,471	743	1.365	475	1.030	268	3.206
1908...............	549,497	615	1.101	385	0.827	230	2.734
1909...............	554,513	705	1.271	475	1.010	230	2.716
1910...............	559,529	677	1.210	497	1.048	180	2.112
1911...............	564,547	684	1.212	441	0.921	243	2.834
1912...............	569,561	560	0.983	349	0.722	211	2.445
1913...............	574,577	634	1.103	422	0.865	212	2.441

*Corrected to July 1 of each year, according to census of 1910.

PNEUMONIA (LOBAR).

TABLE NO. 2—*Deaths According to Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	2	3	....	....	2	3	....	....
Second	1	2	....	....	1	1	....	....
Third	2	....	....	1	1	1	....	1
Fourth	2	1	2	2	3	....	1	1
Fifth	1	1	2	1	....	1	....	2
Sixth	1	1	....	....	3	2	....	....
Seventh	....	3	1	1	3	2	....	....
Eighth	2	1	....	....	1	3	1	....
Ninth	....	2	1	....	....	1	....	....
Tenth	1	....	....	....	3	....	....	....
Eleventh	....	2	2	2	1	....	....	1
Twelfth	1	5	2	3	1	....	1	1
Thirteenth	....	....	....	....	....	....	....	....
Fourteenth	2	....	3	....	....	2	1	3
Fifteenth	3	2	....	....	4	3	1	....
Sixteenth	1	1	1	3	....	1	1	....
Seventeenth	....	....	3	1	1	....	2	1
Eighteenth	1	1	1	....	3	1	1	1
Nineteenth	1	5	....	....	1	2	....	2
Twentieth	3	4	....	....	3	3	1	....
Twenty-first	1	1	....	1	....	1	1	....
Twenty-second	1	....	2	....	1	1	....	....
Twenty-third	2	1	1	1	....	....	....	....
Twenty-fourth	5	3	....	1	....	2	....	....
Bay View	....	....	1	....	....	1	2	....
Sydenham	....	....	....	....	....	....	....	....
Total	33	39	22	17	32	31	13	13

PNEUMONIA (LOBAR).

Sex, Color, and Calendar Months, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
3	2	....	....	2	1	....	....	3	....	....	....	2	1	....	....
1	2	....	....	....	2	....	....	1	....	....	....	1	1	....	....
3	1	....	....	....	....	....	....	2	1	....	....	1	1	1	....
1	....	1	....	3	2	....	....	2	1	....	....	....	....	....	....
3	....	....	1	1	1	....	....	2	1	....	1	....	....	....	....
....	....	....	....	2	1	1	....	1	....	....	....	....	1	....	....
1	1	2	1	....	2	1	....	1	3	....	....	1	....	....	....
....	1	1	....	2	....	1	....	....	....	....	....	1	1	....	....
2	....	....	....	1	1	....	....	....	....	1	....	1	....	....	....
....	1	....	1	1	2	....	....	1	1	....	....	2	....	....	....
....	....	....	2	....	1	....	1	....	....	....	1	....	1	....	....
3	....	....	....	1	....	....	....	1	1	1	....	....	....	....	....
2	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....
1	1	1	....	2	....	3	1	....	2	3	1	....	....	....	....
1	5	2	....	1	....	....	....	1	2	2	....	....	2	2	....
....	1	2	....	1	....	....	1	....	1	....	....	....	....	....	....
....	....	2	5	1	1	2	1	1	....	1	....	....	....	1	....
....	....	....	1	1	1	1	....	2	2	....	....	....	....	....	2
....	2	1	2	....	....	....	....	....	1	1	....	....	2	1	....
2	1	....	....	1	....	....	....	1	3	....	....	....	2	....	1
....	1	1	....	1	1	2	....	....	....	1	....	....	1	....	....
2	1	2	....	....	....	3	2	1	1	2	2	....	....	....	1
....	....	....	1	....	....	....	....	....	1	....	1	2	....	....	....
2	....	....	....	4	1	....	....	2	....	....	....	....	....	....	....
1	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
28	20	15	15	28	17	14	6	22	21	12	6	11	13	5	4

Continued on next page.

PNEUMONIA (LOBAR).

TABLE No. 2 (Continued)—*Deaths According to*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	1	....	....	....	....	....	....	1	3	....	....
Second	....	....	....	....	....	1	....	1	....	....	....	....
Third	2	....	....	....	....	1	....	....	....	....	....	....
Fourth	....	....	1	1	....	....	....	1	....	....	....	....
Fifth	....	....	....	....	....	....	....	....	....	....	....	....
Sixth	1	1	....	....	....	....	....	....	1	....	....	1
Seventh	....	....	....	....	1	2	1	....	....	....	....	....
Eighth	....	....	....	....	1	....	1	....	....	....	....	....
Ninth	....	....	....	....	2	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	....	....	....	....
Eleventh	....	....	....	1	....	....	1	....	....	....	....	....
Twelfth	1	....	....	....	....	....	....	....	....	1	1	....
Thirteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fourteenth	1	....	....	....	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....	1	....	....	1
Sixteenth	....	....	....	....	....	....	....	....	....	....	1	....
Seventeenth	....	....	....	....	....	....	1	....	....	....	1	1
Eighteenth	....	....	....	1	....	....	....	....	1	....	1	....
Nineteenth	....	....	....	....	....	....	....	....	2	1	....	....
Twentieth	....	....	....	....	2	....	....	....	....	....	1	....
Twenty-first	1	....	1	....	....	....	....	....	1	....	....	....
Twenty-second	1	....	....	....	....	....	1	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....	....	....	1	....
Twenty-fourth	4	2	....	....	....	....	....	....	....	....	1	....
Bay View	....	....	1	....	....	....	....	....	1	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	11	4	3	3	6	4	5	2	8	5	7	3

PNEUMONIA (LOBAR).

Wards, Sex, Color, and Calendar Months, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
2	1	1	....	2	1	....	....	1	....	....	....	20	16	1	....
....	2	....	....	1	....	....	....	1	1	....	....	7	12	....	1
....	....	....	....	2	1	....	....	....	....	....	....	13	6	1	2
1	....	....	1	....	....	....	....	....	1	....	2	12	5	5	8
....	....	....	1	....	....	....	....	....	....	1	....	7	4	3	6
....	2	1	....	1	1	....	....	1	1	....	1	11	10	2	2
....	....	....	....	....	....	1	1	....	....	1	....	7	13	7	3
....	....	....	....	....	1	1	....	1	1	....	....	8	8	5	....
1	....	1	....	1	....	....	....	3	2	....	....	11	6	3	....
1	....	....	....	....	3	1	....	....	1	....	....	9	8	1	1
....	....	2	1	....	1	....	....	2	....	....	....	3	5	5	9
....	....	....	....	1	....	....	....	1	....	1	1	10	7	6	5
....	....	....	....	....	....	....	....	....	....	....	....	4	....	....	....
....	....	....	....	....	....	....	1	....	1	1	4	6	6	12	10
....	....	....	1	1	....	....	....	....	....	....	1	12	14	7	3
1	....	....	....	2	....	....	....	1	1	....	....	6	5	5	4
1	....	1	3	....	....	1	1	....	1	....	1	4	2	15	14
....	....	1	....	1	....	1	....	1	....	1	....	10	5	7	5
1	1	1	....	1	4	1	....	....	3	....	....	6	21	5	4
1	....	....	....	2	....	....	....	4	1	1	....	19	14	3	1
1	....	....	....	1	1	....	....	2	3	....	1	8	9	6	2
1	....	1	....	....	....	2	1	....	1	1	1	7	4	14	7
....	....	....	....	....	1	....	....	1	....	....	....	5	3	2	3
....	1	....	....	....	1	....	....	1	1	....	....	18	11	1	1
....	....	....	....	....	1	....	....	....	....	....	....	3	2	4	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11	7	9	7	16	16	8	4	20	19	7	12	226	196	120	92

PNEUMONIA (LOBAR).

TABLE No. 3—*Deaths According to Age, Sex, Color and*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	1	....	....	....	1	....	1	1
Bet. 1 and 3 mos	....	....	3	1	....	3	2	....
Bet. 3 and 12 mos	4	1	4	2	5	1	3	1
Bet. 1 and 2 yrs	4	1	1	2	....	1	1	....
Bet. 2 and 3 yrs	2	1	....	....	....	1	....	....
Bet. 3 and 4 yrs	1	....	....	....	....	1	....	....
Bet. 4 and 5 yrs	....	1	1	....	....	....	....	....
Bet. 5 and 9 yrs	3	....	....	....	1	2	....	2
Bet. 10 and 14 yrs	....	1	....	1	....	2	....	2
Bet. 15 and 19 yrs	1	....	....	....	1	....	....	1
Bet. 20 and 24 yrs	....	....	2	1	2	1	....	1
Bet. 25 and 29 yrs	3	1	2	2	3	....	1	1
Bet. 30 and 34 yrs	2	1	....	....	2	1	....	....
Bet. 35 and 39 yrs	2	2	1	1	2	....	....	1
Bet. 40 and 44 yrs	....	1	2	1	1	1	....	....
Bet. 45 and 49 yrs	....	....	1	....	1	....	1	....
Bet. 50 and 54 yrs	....	1	....	....	3	2	2	1
Bet. 55 and 59 yrs	2	2	....	4	1	2	1	1
Bet. 60 and 64 yrs	....	7	2	1	1	3	....	....
Bet. 65 and 69 yrs	2	9	1	....	2	3	1	....
Bet. 70 and 74 yrs	1	5	....	1	3	2	....	....
Bet. 75 and 79 yrs	2	4	1	....	1	2	....	....
Bet. 80 and 84 yrs	2	1	1	....	2	1	....	1
Bet. 85 and 89 yrs	....	....	....	....	....	1	....	....
Bet. 90 and 94 yrs	1	....	....	....	....	1	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	33	39	22	17	32	31	13	13

PNEUMONIA (LOBAR).

Calendar Months, Also Average Age at Death, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	1	....	....	....	....	....	....	....	....	....	1	....
2	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
2	2	1	2	4	2	1	1	1	....	1	....	1	2	....	1
....	1	2	1	2	....	1	1	5	....	....	1	2	....	1	....
1	1	....	1	....	1	....	....	....	1	1	....	....	2	....	....
2	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
....	....	1	....	....	1	....	....	....	....	....	....	1	....	....	....
1	....	....	....	....	3	....	1	2	1	1	....	....	....	....	....
....	....	....	....	1	....	....	....	....	....	....	1	....	....	....	....
....	....	1	2	1	....	....	....	....	....	....	....	....	....	....	1
2	1	1	2	2	....	3	1	1	1	....	1	....	....	....	....
2	1	1	2	1	....	2	1	2	....	2	....	1	....	....	....
2	2	1	1	1	....	1	....	1	....	....	2	....	....	....	....
1	....	2	....	....	1	1	....	....	....	2	....	....	1	....	....
2	....	2	1	4	1	....	1	3	1	3	....	1	2	2	....
3	....	....	....	2	....	1	....	1	1	....	1	2	2	....	....
1	2	1	2	2	....	3	....	....	1	1	....	1	....	....	1
1	1	....	1	....	3	....	....	....	1	1	....	2	1	....	1
4	2	2	....	2	1	1	....	5	2	....	....	....	....	....	....
1	1	....	....	....	1	....	....	1	6	....	....	....	2	....	....
1	2	....	....	3	2	....	....	....	1	....	....	....	....	....	....
....	2	....	....	....	1	....	....	....	1	....	....	....	....	....	....
....	....	....	....	1	....	....	....	....	3	....	....	....	....	....	....
....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
28	20	15	15	28	17	14	6	22	21	12	6	11	13	5	4

Continued on next page.

PNEUMONIA (LOBAR).

TABLE NO. 3 (Continued)—*Deaths According to Age, Sex, Color*

Ages.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month....	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos..	....	....	....	....	....	....	....	....	....	....	....	1
Bet. 3 and 12 mos..	2	....	....	....	....	....	1	1	....	1	1	....
Bet. 1 and 2 yrs..	2	1	....	....	1	3	....	....	1	....	....	....
Bet. 2 and 3 yrs..	....	1	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs..	1	....	....	....	....	....	....	....	1	....	....	....
Bet. 4 and 5 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs..	....	....	....	....	....	....	....	....	....	1	....	....
Bet. 10 and 14 yrs..	....	....	....	....	....	....	....	1	....	....	....	....
Bet. 15 and 19 yrs..	....	....	....	1	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs..	....	....	....	1	....	....	2	....	....	1	....	1
Bet. 25 and 29 yrs..	1	....	....	....	1	....	....	....	1	....	2	....
Bet. 30 and 34 yrs..	1	....	....	....	1	....	....	....	2	....	....	....
Bet. 35 and 39 yrs..	....	....	1	....	....	....	1	....	....	....	1	1
Bet. 40 and 44 yrs..	....	....	....	1	....	....	....	....	....	....	1	....
Bet. 45 and 49 yrs..	....	....	1	....	1	....	....	....	....	....	1	....
Bet. 50 and 54 yrs..	1	....	1	....	....	....	1	....	....	....	....	....
Bet. 55 and 59 yrs..	2	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs..	....	1	....	....	....	1	....	....	1	....	....	....
Bet. 65 and 69 yrs..	....	....	....	....	2	....	....	....	1	1	....	....
Bet. 70 and 74 yrs..	....	1	....	....	....	....	....	....	....	....	1	....
Bet. 75 and 79 yrs..	....	....	....	....	....	....	....	....	1	....	....	....
Bet. 80 and 84 yrs..	1	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs..	....	....	....	....	....	....	....	....	....	1	....	....
Bet. 90 and 94 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Total........	11	4	3	3	6	4	5	2	8	5	7	3

PNEUMONIA (LOBAR).

and Calendar Months, Also Average Age at Death, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	3	....	2	1
....	....	....	....	....	....	....	....	1	....	....	....	3	3	6	2
2	....	....	....	....	....	....	1	2	....	....	1	23	9	12	10
....	1	1	....	2	....	....	....	....	....	....	1	19	8	7	6
....	....	....	....	....	....	1	....	1	....	....	....	4	8	2	1
....	....	....	....	1	....	....	....	....	....	....	....	7	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	2	2	....
....	....	....	....	....	....	....	....	....	....	....	1	7	7	1	4
....	....	1	....	....	....	....	....	....	....	....	....	1	3	1	5
....	....	....	1	1	....	....	....	1	....	....	2	5	....	1	8
....	....	1	1	....	....	....	....	....	....	....	....	7	4	9	9
....	2	....	1	1	....	1	....	1	2	1	....	17	6	12	7
1	....	....	....	1	1	1	....	1	2	....	....	15	7	3	3
....	....	1	2	....	....	2	1	1	....	....	1	6	4	12	7
4	....	1	....	....	....	....	1	1	2	2	2	16	8	13	7
1	1	2	1	2	....	1	....	2	....	....	....	15	4	8	2
1	1	....	....	1	....	1	....	1	1	....	1	11	8	10	5
....	....	1	....	1	1	....	....	3	....	3	....	12	11	6	7
....	....	1	1	1	2	1	....	2	....	....	1	16	19	7	3
....	....	....	....	....	2	....	....	....	6	....	1	9	31	2	1
....	....	....	....	2	6	....	....	3	4	....	....	13	23	1	1
1	....	....	....	....	2	....	1	....	2	1	1	5	14	2	2
1	2	....	....	2	2	....	....	....	....	....	....	9	9	1	1
....	....	....	....	....	....	....	....	....	....	....	....	....	4	....	....
....	....	....	....	1	....	....	....	....	....	....	....	2	3	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11	7	9	7	16	16	8	4	20	19	7	12	226	196	120	92

PNEUMONIA (LOBAR).

Average Age at Death Due to Pneumonia, and Total.

	Average.	*Total.*
Of all deaths (white and colored)	38,167	634
Of all deaths, five years and under (white and colored)	1,262	141
Of all deaths between five and nineteen years, inclusive (white and colored)	12,013	45
Of all deaths over twenty years (white and colored)	52,409	448

PNEUMONIA (LOBAR).

TABLE NO. 4—*Deaths According to Occupation, Year 1913, Also According to Social Condition.*

Agents (insurance)	2	Liquor dealers	1
Agents (not specified)	1	Lumber dealers	1
Barbers	1	Machinists	6
Bartenders	1	Marble and stone polishers	2
Boilermakers	1	Manufacturers	2
Butchers	2	Merchants	3
Builders and contractors	2	Oyster shuckers	1
Blacksmiths	1	Painters	5
Bootblacks	2	Preachers	1
Bookkeepers	11	Packers	1
Bookbinders	1	Paperhangers	1
Carpenters	1	Physicians	1
Confectioners	1	Plumbers	2
Caulkers	1	Policemen and watchmen	1
Cooks	7	Porters	6
Coopers	1	Printers and engravers	3
Drivers	3	Religieuse	1
Dressmakers and seamstresses	5	Salesmen	2
Dairymen	1	Street cleaners	1
Druggists	4	Seamen	2
Dentists	4	Solicitors	1
Domestics	39	Steam railway employees	2
Engineers (mechanical)	1	Shoemakers	2
Engineers (civil)	1	Stone cutters	4
Engineers (stationary engine)	1	Storekeepers	2
Elevator boys	1	Servants	5
Foremen	1	Superintendents	3
Factory hands	1	Stevedores	9
Farmers	3	School children	8
Firemen (stationary engine)	2	Soldiers	1
Grocers	1	Tailors and tailoresses	6
Gold and silversmiths	1	Teachers	2
Housewives	80	Tinners	1
Hostlers	1	Traveling salesmen	1
Inspectors	1	Upholsterers	1
Jobbers	1	Waiters	7
Janitors	2	Waitresses	1
Laborers	80	Whitewashers	1
Launderers or laundresses	8	No occupation	255
Lamplighters	1		

Social Condition.

Unknown	6	Widowers	40
Divorced	2	Widows	100
Married	204		
Single	282	Total	634

BRONCHO-PNEUMONIA.

TABLE NO. 1.—*Total Death Rate and Death Rates for White and Colored Population, Based on Census of 1910, from 1903 to 1913, Inclusive.*

YEAR.	*Estimated Population.	Total Deaths.	Death Rate per 1,000 of Population.	White. No. of Deaths.	White. Death Rate per 1,000.	Colored. No. of Deaths.	Colored. Death Rate per 1,000.
1903	524,417	335	0.639	219	0.494	116	1.425
1904	529,533	289	0.546	173	0.387	116	1.415
1905	534,449	350	0.655	237	0.524	113	1.370
1906	539,465	414	0.769	271	0.594	143	1.722
1907	544,481	371	0.681	237	0.514	134	1.603
1908	549,497	313	0.570	187	0.402	126	1.498
1909	554,513	370	0.667	220	0.468	150	1.772
1910	559.529	346	0.618	245	0.516	101	1.185
1911	564,547	407	0.721	270	0.564	137	1.598
1912	569,561	453	0.795	309	0.639	144	1.668
1913	574,577	562	0.978	374	0.766	188	2.165

*Corrected to July 1 of each year, according to census of 1910.

BRONCHO-PNEUMONIA.

TABLE No. 2—*Deaths Arranged by Sex, Color,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	1	1	....	....	....	1	....	....
Second	....	2	....	....	2	....	....	....
Third	1	1	....	....	2	1	1	1
Fourth	....	....	....	....	....	....	....	....
Fifth	....	....	1	1	1	1	1	....
Sixth	2	1	....	....	1	2	....	....
Seventh	....	2	1	....	3	1	....	....
Eighth	....	1	....	....	....	1	....	....
Ninth	....	....	....	....	1	....	....	1
Tenth	....	2	....	....	2	3	....	....
Eleventh	....	....	....	....	....	....	....	2
Twelfth	....	1	....	1	....	....	....	....
Thirteenth	3	1	....	....	....	3	....	....
Fourteenth	....	....	2	2	2	....	1	....
Fifteenth	....	....	....	....	....	1	1	3
Sixteenth	1	....	2	....	....	1	1	2
Seventeenth	1	....	1	1	....	....	2	....
Eighteenth	1	3	1	....	....	3	....	....
Nineteenth	....	1	....	....	....	....	....	1
Twentieth	....	....	....	....	....	1	....	....
Twenty-first	1	....	....	....	....	1	....	....
Twenty-second	1	....	....	1	....	....	....	2
Twenty-third	....	....	....	....	2	....	....	....
Twenty-fourth	....	2	....	....	....	1	....	....
Bay View	2	....	1	....	....	2	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	14	18	9	6	16	23	7	12

BRONCHO-PNEUMONIA.

Wards and Calendar Months, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F
2	1	....	....	4	....	....	....	3	1	....	....	....	1	....	....
1	....	....	....	1	1	....	....	....	1	....	....	....	....	....	....
....	1	....	....	3	....	....	....	....	....	....	....	2	....	....	....
....	1	1	1	....	....	2	1	1	1	....	1	2	2	2	....
1	1	1	1	1	....	1	....	....	1	2	1	2	....	....	....
....	....	....	....	2	6	2	....	1	1	....	....	....	....	....	1
3	....	....	....	1	2	1	....	3	1	....	....	1	1	....	....
1	1	....	....	1	2	....	....	1	....	1	....	1	....	....	....
....	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	2	2	....	1	....	2	....	1	....
1	1	1	1	....	....	....	1	1	1	2	1	....	....	2	1
....	....	....	1	1	....	....	1	....	....	....	1	....	....	1	....
2	1	....	....	....	2	....	....	....	2	....	....	1	....	....	1
....	....	1	2	1	2	....	....	3	5	....	1	4	1	....	....
....	....	1	....	....	....	....	....	1	1	....	....	1	1	....	1
1	....	....	....	1	....	....	1	....	....	....	....	....	....	1	1
....	....	....	..1	....	1	....	2	....	....	1	1	....	....	4	2
2	1	2	1	....	....	1	1	....	....	....	1	....	1	....	....
1	2	1	....	1	....	1	....	2	....	....	....	1	....	....	....
1	2	....	....	2	1	....	....	1	....	....	....	....	....	....	....
....	1	....	1	....	....	....	1	1	....	....	....	....	1	....	....
....	....	1	....	....	1	....	....	2	1	....	....	1	....	....	....
....	....	....	....	....	....	1	....	1	....	....	1	....	....	1	....
1	1	....	....	....	1	....	....	....	1	....	....	....	1	....	....
....	....	1	....	3	....	....	1	1	1	1	1	2	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
17	14	11	9	23	19	9	11	24	18	8	9	20	10	12	7

Continued on next page.

BRONCHO-PNEUMONIA.

TABLE NO. 2 (Continued)—*Deaths Arranged by Sex,*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	1	....	....	....	3	1	....	....	....	....	....	....
Second	1	....	....	....	....	1	....	....	....	1	....	....
Third	....	1	....	....	....	2	....	1	....	....	....	....
Fourth	....	....	1	....	....	....	1	....	....	....	1	1
Fifth	....	....	....	....	....	....	1	1	....	....	....	....
Sixth	1	1	....	....	....	1	....	....	....	....	1	1
Seventh	1	2	....	....	....	1	....	....	....	....	....	....
Eighth	1	....	....	....	....	....	....	....	1	1	....	2
Ninth	....	....	....	....	....	....	....	....	....	....	....	....
Tenth	1	....	....	....	2	3	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....	....	1	....	....
Twelfth	1	1	....	....	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	1	....	....	....	1	....	....
Fourteenth	....	6	1	1	....	....	....	1	....	2	....	....
Fifteenth	....	....	1	....	....	1	2	....	....	....	....	....
Sixteenth	....	....	1	....	....	1	....	....	....	....	....	....
Seventeenth	....	1	....	....	....	....	....	....	....	....	1	1
Eighteenth	3	....	....	....	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	1	....	....	....	....	....	....	....
Twentieth	....	1	....	....	....	1	....	....	....	1	....	....
Twenty-first	1	....	....	....	....	....	....	....	....	....	....	....
Twenty-second	....	2	1	....	....	....	....	....	....	....	....	1
Twenty-third	....	....	....	....	....	....	....	....	1	....	....	1
Twenty-fourth	....	....	....	....	1	1	....	....	....	1	....	....
Bay View	2	....	....	....	1	....	....	1	2	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	13	15	5	1	8	14	4	4	4	8	3	7

BRONCHO-PNEUMONIA.

Color, Wards, and Calendar Months, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1	....	....	....	1	3	....	....	....	1	....	....	16	10	....	....
....	....	....	1	....	1	....	....	1	1	....	....	6	8	....	1
....	2	....	....	1	....	....	....	1	....	....	....	10	8	1	2
....	....	....	1	....	3	3	2	....	....	....	2	3	7	11	9
1	....	2	....	1	....	....	1	....	1	1	....	7	4	10	5
....	....	....	....	1	....	....	....	2	3	1	....	10	15	4	2
....	....	1	....	1	2	1	1	1	4	....	....	14	16	4	1
....	1	....	....	3	1	....	1	....	....	1	1	9	8	2	4
....	1	....	....	....	....	....	....	2	1	....	....	4	2	1	1
....	2	....	....	....	....	....	....	....	....	....	....	9	10	2	2
....	....	1	....	....	....	1	....	....	....	1	2	2	3	8	8
2	....	....	2	1	....	....	....	....	1	....	....	5	3	1	6
....	1	....	1	1	....	....	....	2	....	....	....	9	12	....	2
2	....	....	1	1	1	....	1	2	2	....	2	15	19	5	11
....	....	1	3	....	1	1	1	1	1	2	2	3	6	9	10
....	....	....	1	....	....	....	....	....	1	2	1	3	3	7	6
....	....	1	....	....	....	2	1	....	....	....	....	1	2	12	9
1	2	....	....	4	2	1	....	1	....	....	....	12	12	5	3
....	....	....	....	....	1	....	....	....	1	....	....	6	5	2	1
1	....	....	....	....	....	....	....	3	1	....	....	8	8	....	....
1	....	....	....	....	1	....	....	1	....	....	....	5	4	....	2
....	1	....	....	....	....	....	1	1	....	....	1	5	5	2	6
....	....	1	....	1	....	....	....	....	1	....	....	5	1	3	2
4	....	....	....	1	....	....	....	....	....	....	....	7	9	....	....
1	....	....	1	1	....	....	....	2	....	....	....	17	4	3	4
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
14	10	7	11	18	16	9	9	20	19	8	11	191	184	92	97

BRONCHO-PNEUMONIA.

TABLE NO. 3—*Deaths According to Age, Sex,*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	1	....	....	2	1	1
Bet. 1 and 3 mos	....	2	....	....	2	1	1	....
Bet. 3 and 12 mos	3	2	3	3	5	2	1	4
Bet. 1 and 2 yrs	2	....	1	2	3	2	1	....
Bet. 2 and 3 yrs	....	1	2	....	1	....	2	1
Bet. 3 and 4 yrs	....	2	....	....	....	....	1	1
Bet. 4 and 5 yrs	....	....	....	....	1	....	....	....
Bet. 5 and 9 yrs	....	....	....	....	....	1	....	1
Bet. 10 and 14 yrs	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	1	....	1	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	1	1	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	1	....	1	....	....	....	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	1	....	1
Bet. 55 and 59 yrs	....	2	....	....	....	1	....	....
Bet. 60 and 64 yrs	....	2	....	....	....	2	....	1
Bet. 65 and 69 yrs	2	1	....	....	2	2	....	1
Bet. 70 and 74 yrs	4	1	....	....	1	6	....	....
Bet. 75 and 79 yrs	1	2	....	....	....	2	....	....
Bet. 80 and 84 yrs	....	2	....	....	....	1	....	....
Bet. 85 and 89 yrs	....	1	....	....	....	....	....	1
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	14	18	9	6	16	23	7	12

BRONCHO-PNEUMONIA.

Color and Calendar Months, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
3	....	1	....	1	1	....	1	....	1	....	....	1	1	....	....
....	1	....	1	....	2	2	1	2	....	....	1	1	....	....	....
3	2	3	1	5	3	1	3	8	4	4	1	6	2	6	4
3	1	2	2	7	3	3	1	8	4	1	2	3	2	3	....
....	....	1	2	1	1	....	1	1	2	....	2	....	....	....	....
....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....
....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....
1	....	1	....	1	....	1	....	....	....	....	....	1	....	....	....
1	....	....	....	....	....	....	....	....	1	....	....	....	....	1	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	1	....	....	1	....	....	....	....	....
....	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	1	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
1	....	....	....	1	1	....	....	....	....	....	....	1	....	....	....
....	....	1	....	2	....	....	1	....	1	....	2	2	....	....	1
....	1	....	....	1	1	....	....	1	....	....	....	....	....	....	....
....	1	1	1	....	....	1	1	2	1	....	....	1	....	....	....
1	....	....	1	1	1	1	....	1	1	1	....	1	....	....	....
1	3	....	....	....	1	....	....	1	....	....	1	1	3	....	....
....	....	1	....	1	1	....	....	....	1	....	....	....	2	....	1
1	2	....	....	1	....	....	....	....	1	....	....	1	....	1	....
....	1	....	....	....	2	....	....	....	1	....	....	....	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
17	14	11	9	23	19	9	11	24	18	8	9	20	10	12	7

Continued on next page.

BRONCHO-PNEUMONIA.

TABLE No. 3 (Continued)—*Deaths According to Age,*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month...	1	2	....	....	....	1	1	1	....	....	1	1
Bet. 1 and 3 mos..	1	....	....	....	1	1	....	....	....	2	....	3
Bet. 3 and 12 mos..	1	4	2	....	1	2	2	....	....	3	1	1
Bet. 1 and 2 yrs..	4	5	1	....	3	1	....	1	2	....	....	1
Bet. 2 and 3 yrs..	....	1	....	....	1	1	....	....	....	2	....	....
Bet. 3 and 4 yrs..	1	....	1	....	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs..	1	....	....	....	....	....	....	....	....	....	1	....
Bet. 5 and 9 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs..	....	....	....	....	....	1	....	....	....	....	....	....
Bet. 25 and 29 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs..	....	....	1	....	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs..	1	....	....	....	....	1	1	....	....	....	....	1
Bet. 60 and 64 yrs..	....	1	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs..	....	2	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs..	....	....	....	....	....	3	....	1	1	....	....	....
Bet. 75 and 79 yrs..	3	....	....	....	....	2	....	1	....	....	....	....
Bet. 80 and 84 yrs..	....	....	....	....	2	1	....	....	....	....	....	....
Bet. 85 and 89 yrs..	....	....	....	1	....	....	....	....	....	1	....	....
Bet. 90 and 94 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs..	....	....	....	....	....	....	....	....	1	....	....	....
Total........	13	15	5	1	8	14	4	4	4	8	3	7

BRONCHO-PNEUMONIA.

Sex, Color and Calendar Months, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1	....	1	1	....	1	1	2	2	....	....	1	9	9	7	8
2	....	1	3	....	2	1	....	5	....	1	....	14	11	6	9
5	4	1	2	7	2	2	3	3	6	5	3	47	36	31	25
1	1	3	3	3	....	2	1	3	2	2	3	42	21	19	16
2	1	....	1	2	....	1	....	....	2	....	....	8	11	6	7
....	....	....	....	1	1	....	1	....	....	....	....	3	4	2	2
....	....	....	....	....	1	....	....	....	....	....	1	2	1	2	2
1	....	....	....	....	1	....	....	1	....	....	....	5	2	2	1
....	1	....	....	....	....	....	....	1	....	....	....	2	2	1	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	1	1
....	....	....	....	....	....	....	....	....	1	....	....	....	2	....	1
....	....	....	....	....	1	....	....	1	1	....	....	2	3	2	....
....	....	....	....	....	....	....	....	....	1	....	....	2	1	....	1
....	....	....	....	....	....	1	....	....	....	....	....	1	....	1	....
....	....	....	....	....	2	....	....	....	....	....	....	4	3	2	....
....	....	....	....	....	....	1	....	....	1	....	1	4	3	2	6
1	....	....	....	....	....	....	....	....	1	....	1	4	7	1	2
....	....	....	....	1	....	....	1	1	....	....	....	5	7	2	4
....	2	....	....	1	....	....	....	2	1	....	1	11	10	2	3
1	....	1	....	1	....	....	1	1	....	....	....	12	17	1	3
....	....	....	1	....	....	....	....	....	2	....	....	5	12	1	3
....	....	....	....	2	5	....	....	....	1	....	....	7	13	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	6	....	2
....	1	....	....	....	....	....	....	....	....	....	....	....	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
14	10	7	11	18	16	9	9	20	19	8	11	191	184	92	97

BRONCHO-PNEUMONIA.

Table No. 4—*Deaths According to Occupations and Social Condition, Year* 1913.

Bakers	2	Jobbers	1
Bartenders	1	Junk dealers	1
Builders and contractors	1	Jockeys	1
Bricklayers	3	Laborers	21
Bookkeepers, clerks	3	Launderers or laundresses	1
Carpenters	2	Laundry work (steam)	1
Cabinetmakers	2	Operators	1
Canmakers	1	Policemen and watchmen	1
Cooks	4	Postoffice employees	1
Cutters	1	Porters	1
Cloth pressers	1	Potters	1
Dressmakers and seamstresses	1	Processors	1
Domestics	20	Seamen	1
Electrical workers	1	Scowmen	1
Embroiderers	1	Shoemakers	3
Foremen	1	Servants	1
Factory hands	1	Stevedores	1
Farmers	2	School children	6
Farm laborers	1	Tailors or tailoresses	3
Grocers	1	Waiters	2
Housewives	39	No occupation	424
Inspectors	1		

Social Condition.

Unknown	4	Widows	61
Divorced	1	Widowers	24
Single	411		
Married	63	Total	564

BRONCHITIS (ACUTE AND CHRONIC).

Table No. 1—*Showing Deaths According to Color,*

Wards.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	1	....	....	....	3	....	....	....
Second	1	1	....	....	1	....	....	....
Third	....	....	....	....	1	....	....	....
Fourth	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	1	....
Sixth	....	1	....	....	....	....	....	2
Seventh	....	1	1	....	....	....	....	....
Eighth	1	....	....	....	....	2	....	....
Ninth	....	1	....	....	1	1	....	....
Tenth	1	....	....	....	1	....	....	....
Eleventh	1	....	....	....	....	....	1	....
Twelfth	1	1	1	....	....	....	....	....
Thirteenth	....	1	....	....	....	....	....	....
Fourteenth	....	1	....	....	2	....	....	1
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	....	1	....	....	....	2	1	....
Seventeenth	....	....	....	....	....	....	....	1
Eighteenth	....	1	1	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	1	....	....
Twenty-first	1	....	....	....	....	....	1	....
Twenty-second	....	....	....	1	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....
Bay View	....	1	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	7	10	3	1	9	6	4	4

BRONCHITIS (ACUTE AND CHRONIC).

Sex, Wards, and Calendar Months, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
1	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
1	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....
....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	1	....	....	....	....	....	....
....	1	1	....	....	....	1	....	....	....	....	....	....	....	1	....
1	1	1	....	1	....	....	....	....	....	....	....	....	....	....	....
1	....	....	1	2	....	....	....	....	....	....	....	....	....	1	....
1	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	1	....	....	....	1	1	....	....	....	....	....	....	....	....
....	1	....	....	....	1	....	....	1	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....
1	....	....	1	1	....	1	1	....	1	....	....	....	....	....	....
....	....	....	....	....	....	2	....	....	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11	6	4	3	5	4	5	2	4	3	....	1	3	3	2	....

Continued on next page.

BRONCHITIS (ACUTE AND CHRONIC).

Table No. 1 (Continued)—*Showing Deaths According to*

Wards.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First						1	1					
Second						1			1			
Third									1			
Fourth												
Fifth												
Sixth										1		
Seventh												
Eighth					1	2						
Ninth												
Tenth												
Eleventh		1										
Twelfth				1	1							
Thirteenth												
Fourteenth								1				
Fifteenth		1		1	1							
Sixteenth									1			
Seventeenth					1						1	
Eighteenth			1									
Nineteenth												
Twentieth	1											
Twenty-first					1							
Twenty-second				1								1
Twenty-third												1
Twenty-fourth						1						
Bay View												
Sydenham												
Total	1	2	1	3	5	5	1	1	3	1	1	2

BRONCHITIS (ACUTE AND CHRONIC).

Color, Sex, Wards, and Calendar Months, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	1	....	....	1	....	....	....	6	3	1	....
....	1	....	....	....	....	....	....	....	....	....	....	5	4	....	....
....	....	....	....	....	1	....	....	1	1	....	....	4	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	2	1	....
....	....	....	....	....	1	....	....	....	....	....	....	1	5	....	2
....	1	....	....	....	1	....	1	....	....	....	1	....	4	1	2
....	....	....	....	....	....	....	1	....	....	....	....	4	4	....	1
1	1	....	....	....	....	....	....	....	....	....	....	2	3	....	1
....	....	....	....	1	....	....	....	....	....	....	....	4	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	2	1	....
....	....	1	....	....	....	....	....	....	....	....	....	2	2	5	1
....	....	....	....	....	....	....	....	....	1	....	....	2	3	1	....
....	....	....	1	....	....	....	....	....	....	1	....	5	1	2	4
....	....	1	....	....	....	....	1	....	....	....	....	2	1	2	3
....	....	....	....	....	....	....	....	....	....	....	....	1	3	1	....
....	....	1	....	....	....	1	1	....	1	....	....	1	1	5	3
1	....	....	....	....	....	....	....	....	2	....	....	2	5	2	....
....	....	....	1	....	2	....	....	....	....	1	....	....	2	1	1
....	....	....	....	....	1	....	....	....	1	....	....	2	4	....	....
....	....	....	....	....	....	....	....	1	....	....	....	5	1	2	2
....	....	....	....	....	....	....	....	....	....	....	....	....	1	2	3
....	....	....	....	1	....	....	....	....	1	....	....	3	1	....	1
....	....	....	....	2	....	....	....	1	1	....	....	3	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2	3	3	2	4	7	1	4	4	8	2	1	58	58	27	24

BRONCHITIS (ACUTE AND CHRONIC).

Table No. 2—*Showing Deaths According to Age,*

Ages.	January.				February.			
	White.		Colored.		White.		Colored	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	2	....	....	....
Bet. 1 and 3 mos	1	....	....	....	1	1	....	....
Bet. 3 and 12 mos	1	1	1	1	1	2	3	1
Bet. 1 and 2 yrs	....	1	....	....	1	....	....	1
Bet. 2 and 3 yrs	1	....	....	....	....	....	....	1
Bet. 3 and 4 yrs	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	1
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs	....	....	1	....	....	....	1	....
Bet. 55 and 59 yrs	....	2	....	....	1	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	2	....	....
Bet. 65 and 69 yrs	3	2	1	....	....	....	....	....
Bet. 70 and 74 yrs	....	1	....	....	1	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	1	....	....
Bet. 80 and 84 yrs	....	1	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	2	....	....	2	....	....	....
Bet. 90 and 94 yrs	1	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	7	10	3	1	9	6	4	4

BRONCHITIS (ACUTE AND CHRONIC).

Color, Sex and Calendar Months, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
1	....	....	....	2	....	1	....	....	....	....	....	1	....	....	....
4	2	2	1	1	2	2	....	....	....	....	....	....	....	1	....
....	....	....	1	....	....	....	2	....	....	....	....	....	....	....	....
....	....	....	....	1	1	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	1	....	....	....	....	....	....	....
....	....	....	....	....	....	1	....	....	....	....	....	....	....	1	....
....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
1	....	....	....	....	....	....	....	....	1	....	....	1	....	....	....
....	1	....	....	1	....	....	....	1	1	....	....	....	....	....	....
2	1	1	....	....	....	....	....	2	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	1	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11	6	4	3	5	4	5	2	4	3	....	1	3	3	2	....

Continued on next page.

BRONCHITIS (ACUTE AND CHRONIC).

TABLE NO. 2 (Continued)—*Showing Deaths According*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month.....	....	....	....	....	....	....	....	....	1	....	....	....
Bet. 1 and 3 mos..	....	....	....	....	1	....	....	....	....	....	....	1
Bet. 3 and 12 mos..	....	....	1	1	....	1	....	....	....	....	....	1
Bet. 1 and 2 yrs..	....	....	....	1	....	....	1	1	1	....	....	....
Bet. 2 and 3 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs..	....	....	....	....	....	....	....	....	....	....	1	....
Bet. 15 and 19 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs..	....	....	....	1	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs..	....	1	....	....	1	....	....	....	1	....	....	....
Bet. 65 and 69 yrs..	....	....	....	....	....	1	....	....	....	....	....	....
Bet. 70 and 74 yrs..	....	....	....	....	....	1	....	....	....	1	....	....
Bet. 75 and 79 yrs..	1	....	....	....	1	....	....	....	....	....	....	....
Bet. 80 and 84 yrs..	....	1	....	....	1	2	....	....	....	....	....	....
Bet. 85 and 89 yrs..	....	....	....	....	1	....	....	....	....	....	....	....
Bet. 90 and 94 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Total.........	1	2	1	3	5	5	1	1	3	1	1	2

BRONCHITIS (ACUTE AND CHRONIC).

to Age, Color, Sex and Calendar Months, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	1	....	....	1	....	....	1	1	....	....	6	2	1	....
....	....	....	1	....	....	1	4	1	....	....	....	8	1	2	6
....	....	1	....	....	....	....	....	1	....	1	....	8	8	12	5
....	....	....	....	2	....	....	....	....	2	....	....	4	3	1	6
....	....	....	....	....	1	....	....	....	....	....	....	2	3	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	1	....	....	....	....	....	....	1	....	....	1	1	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1
....	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	4	1
....	....	....	....	....	....	....	....	....	....	....	....	1	2	....	1
1	2	....	....	1	....	....	....	....	2	....	....	4	8	....	....
....	....	....	....	1	....	....	....	....	....	....	1	6	4	1	1
1	1	....	....	....	....	....	....	1	....	....	....	5	6	....	....
....	....	....	....	....	2	....	....	....	2	....	....	6	7	1	....
....	....	....	....	....	1	....	....	....	....	....	....	1	5	....	....
....	....	....	....	....	2	....	....	....	....	....	....	3	6	....	1
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	....
2	3	3	2	4	7	1	4	4	8	2	1	58	58	27	24

BRONCHITIS (ACUTE AND CHRONIC).

TABLE NO. 1—*Showing Deaths by Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	1	....	....	1	....	....	....
Second	....	....	....	....	1	2	....	....
Third	....	....	....	....	1	....	....	....
Fourth	....	....	....	2	1	....	....	....
Fifth	1	1	....	1	....	....	....	....
Sixth	2	....	....	....	....	....	....	....
Seventh	....	....	....	....	1	....	....	....
Eighth	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	1	1	....	....
Tenth	2	1	....	....	....	....	....	....
Eleventh	....	....	....	....	1	....	....	....
Twelfth	....	....	....	....	....	1	1	....
Thirteenth	1	....	....	....	....	....	....	....
Fourteenth	2	1	....	....	1	....	....	....
Fifteenth	....	....	....	....	1	....	....	....
Sixteenth	1	....	....	....	....	....	1	....
Seventeenth	....	....	2	2	....	....	1	....
Eighteenth	....	....	1	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....
Twentieth	1	....	....	....	....	....	....	....
Twenty-first	1	....	....	1	....	....	1	....
Twenty-second	....	....	1	1	....	....	1	....
Twenty-third	....	1	....	....	....	1	....	....
Twenty-fourth	....	....	....	....	....	2	....	....
Bay View	....	....	....	....	1	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	11	5	4	7	10	7	5	....

BRONCHITIS (ACUTE AND CHRONIC).

Months, Color and Sex, Year 1905.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....
2	2	....	....	....	1	....	....	1	....	....	....	....	....	....	....
....	....	....	1	....	1	....	....	....	....	....	1	....	....	....	2
1	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....
1	....	....	....	....	....	....	....	1	....	1	....	....	1	....	....
....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	1	....	....	1	....	1	....	....	....	....	....	....	....	....	....
1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	2	....	....	1	1	....	....	....	1	....	....	....	....	....	....
....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	1	....	....	....	....	1	....	....	1	....	....	1	....
....	2	....	....	....	....	....	....	....	....	....	....	....	1	....	....
1	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	1	1	....	....	....	....	....	....	....	....	1	....	1	....
....	....	3	1	1	....	....	....	1	1	....	....	....	....	....	....
2	....	1	2	....	....	1	....	....	....	2	3	....	....	....	....
....	1	1	....	....	....	....	1	....	....	....	....	1	....	1	....
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	1	....	1	....	1	....	....	....	1	....	....	....	1	....	....
3	3	3	....	2	....	....	1	....	1	....	....	1	....	....	....
....	....	1	....	....	....	1	1	....	....	....	1	1	....	....	....
....	1	1	....	1	1	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	2	....	....	2	....	....	....	1	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11	14	12	7	7	9	3	3	7	8	4	6	5	4	3	2

Continued on next page

BRONCHITIS (ACUTE AND CHRONIC).

TABLE NO. I (Continued)—*Showing Deaths*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	1	....	....	....	....	....	....	....
Second	....	....	....	....	....	1	....	....	1	....	....	....
Third	....	....	....	....	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	....	....
Fifth	....	....	1	....	....	....	....	....	....	....	....	....
Sixth	....	1	....	....	....	....	....	....	....	....	....	....
Seventh	....	1	....	....	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....	....	....	....	....
Ninth	....	1	....	....	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	....	1	....	....
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....
Twelfth	....	1	....	1	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	2	....	....	....	....	....	....
Fourteenth	1	....	....	....	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	1	....	....	....	....	1	....	....
Sixteenth	....	....	....	....	....	....	....	....	....	....	1	1
Seventeenth	....	....	....	....	....	....	....	....	....	....	1	....
Eighteenth	....	....	1	....	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....	....	....	1	....
Twentieth	....	....	....	....	....	....	....	....	1	....	....	....
Twenty-first	....	....	....	1	....	....	1	....	....	....	....	1
Twenty-second	....	....	....	2	....	1	....	....	....	....	....	1
Twenty-third	....	....	....	....	....	....	....	....	....	....	....	1
Twenty-fourth	....	....	....	....	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	1	4	2	4	2	4	1	....	2	2	3	4

BRONCHITIS (ACUTE AND CHRONIC).

by Wards, Months, Color and Sex, Year 1905.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	1	....	....	....	....	....	....	....	....	....	....	2	2	....	....
1	....	....	....	2	....	....	....	....	1	....	....	6	5	....	....
....	2	....	....	....	....	....	....	....	2	....	....	4	7	....	....
....	....	....	....	....	....	....	....	....	....	....	1	1	1	....	7
....	....	....	....	1	....	....	1	....	....	....	....	4	1	2	2
....	....	....	....	1	....	....	....	2	....	....	....	7	2	1	....
....	....	....	....	....	....	....	....	....	....	....	....	1	3	....	....
....	....	1	....	....	1	....	....	....	....	1	....	1	2	3	....
....	....	....	....	....	....	1	....	....	....	....	....	2	3	1	....
....	....	....	....	....	1	....	1	....	....	....	....	3	7	....	1
....	1	....	....	....	....	....	....	....	....	....	....	1	1	1	....
....	1	....	....	1	....	....	....	....	....	....	....	2	3	2	3
....	....	....	....	....	....	....	....	....	....	....	....	1	5	....	....
....	....	....	1	....	....	....	....	1	....	....	....	6	2	....	1
....	....	1	....	....	1	....	....	....	....	....	1	3	2	3	2
1	....	....	....	....	2	....	....	....	....	....	....	4	3	5	2
....	....	....	1	1	....	....	....	1	....	1	....	4	....	9	8
....	1	....	2	....	....	....	1	....	....	....	1	1	2	4	5
....	....	....	....	2	....	....	....	....	....	....	....	2	1	1	....
....	....	....	....	2	....	....	....	....	....	....	....	4	4	....	1
....	....	....	2	....	2	....	....	....	....	....	....	7	6	5	6
....	1	1	1	....	....	....	1	....	2	....	....	1	4	5	8
....	3	....	....	....	1	....	....	....	....	....	....	1	9	1	1
1	....	....	....	1	....	....	....	1	....	....	....	6	5	....	....
....	....	....	....	....	....	....	....	....	1	....	....	1	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3	10	3	7	11	8	1	4	5	6	2	3	75	81	43	47

BRONCHITIS (ACUTE AND CHRONIC).

Table No. 2—*Showing Deaths by Ages,*

Ages.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	1	2	....	....	....	1	....	....
Bet. 1 and 3 mos	1	....	....	....	....	....	1	....
Bet. 3 and 12 mos	3	2	1	4	3	1	2	....
Bet. 1 and 2 yrs	1	....	....	1	2	1	2	....
Bet. 2 and 3 yrs	....	....	1	....	....	1	....	....
Bet. 3 and 4 yrs	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs	....	....	1	....	....	....	....	....
Bet. 15 and 19 yrs	....	....	....	1	....	....	....	....
Bet. 20 and 24 yrs	....	....	1	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	1	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	1	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	1	2	....	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	1	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	1	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	1	1	....	....	1	1	....	....
Bet. 80 and 84 yrs	1	....	....	....	....	2	....	....
Bet. 85 and 89 yrs	....	....	....	....	1	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	11	5	4	7	10	7	5	....

BRONCHITIS (ACUTE AND CHRONIC).

Months, Color and Sex, Year 1905.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
2	1	1	....	....	1	....	....	....	....	....	....	....	....	....	....
....	1	2	1	....	1	....	....	2	....	....	....	1	1	....	....
....	3	2	1	3	1	....	....	1	....	1	1	1	....	1	....
2	1	3	1	....	....	1	2	....	1	1	1	....	....	....	....
....	....	....	1	1	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	1	....	....	....	....	....
....	....	....	1	....	....	1	1	1	....	....	1	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	....	....	1	....	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	3	....	....	....	....	....	....	....	....	1	1	....	....	1
....	....	1	....	....	....	....	....	....	....	....	....	....	1	1	....
....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	1	....	....	....	....	1	....	1	1	1	....	....
....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....
....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	2	1	....	....	....	3	....	....	....	....	....	....
4	1	....	....	....	....	....	....	2	....	....	....	....	1	....	....
....	3	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	2	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	2	....	....	1	....	....	....
....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11	14	12	7	7	9	3	3	7	8	4	6	5	4	3	2

Continued on next page.

BRONCHITIS (ACUTE AND CHRONIC).

TABLE No. 2 (Continued)—*Showing Deaths*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month...	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos.	....	2	....	1	....	1	....	....	2	....	1	....
Bet. 1 and 2 yrs..	....	....	1	....	....	1	....	....	....	....	....	1
Bet. 2 and 3 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs..	....	....	....	1	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs..	....	....	1	....	....	....	....	....	....	....	....	1
Bet. 30 and 34 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs..	....	....	....	....	....	....	....	....	....	....	....	1
Bet. 40 and 44 yrs..	....	....	....	1	....	....	....	....	....	....	1	....
Bet. 45 and 49 yrs..	....	....	....	....	....	....	1	....	....	....	....	1
Bet. 50 and 54 yrs..	....	1	....	....	....	....	....	....	....	....	1	....
Bet. 55 and 59 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs..	....	....	....	1	....	2	....	....	....	....	....	....
Bet. 65 and 69 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs..	....	1	....	....	1	....	....	....	....	....	....	....
Bet. 75 and 79 yrs..	....	....	....	....	....	....	....	....	....	2	....	....
Bet. 80 and 84 yrs..	1	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs..	....	....	....	....	1	....	....	....	....	....	....	....
Bet. 95 and 99 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Total........	1	4	2	4	2	4	1	....	2	2	3	4

BRONCHITIS (ACUTE AND CHRONIC).

by Ages, Months, Color and Sex, Year 1905.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	1	....	....	....	....	....	....	1	....	3	5	2	1
....	....	....	1	....	1	....	....	....	1	....	....	4	5	3	2
....	1	1	3	2	....	....	2	....	2	....	....	15	13	9	12
1	2	....	1	....	1	....	1	....	....	....	1	6	7	8	9
1	1	....	....	2	....	....	....	....	....	1	....	4	3	2	1
....	....	1	....	....	1	....	....	....	....	....	....	....	2	2	....
....	....	....	....	....	....	....	....	....	....	....	1	1	....	1	4
....	1	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	2	2
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2
....	....	....	....	....	....	....	....	....	....	....	....	1	....	2	1
....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	2
....	....	....	....	....	....	....	....	1	....	....	....	1	....	....	....
....	....	1	....	....	....	....	....	....	....	....	....	2	....	4	3
....	....	....	1	....	....	....	1	....	....	....	....	1	1	3	3
....	....	....	....	....	....	1	....	....	....	....	....	2	1	2	2
....	2	....	....	....	....	....	....	....	....	....	....	3	5	1	1
....	....	....	....	2	2	....	....	1	....	....	....	4	2	1	....
1	....	....	....	1	1	....	....	1	....	....	....	3	4	....	2
....	1	....	....	....	....	....	....	....	....	....	....	2	5	....	....
....	1	....	....	....	1	....	....	....	2	....	....	8	7	....	....
....	....	....	....	....	....	....	....	1	....	....	....	3	8	....	....
....	....	....	....	3	1	....	....	....	1	....	....	5	7	....	....
....	1	....	....	1	....	....	....	1	....	....	....	4	3	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3	10	3	7	11	8	1	4	5	6	2	3	75	81	43	47

BRONCHITIS (ACUTE AND CHRONIC).

TABLE No. 1—*Showing Deaths According to*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	1	....	....	....	....	....	....	....
Second	1	....	....	....	....	2	....	....
Third	1	1	....	....	....	1	....	....
Fourth	....	....	2	1	....	1	1	....
Fifth	....	....	....	....	....	....	....	....
Sixth	....	1	....	....	1	....	....	....
Seventh	....	....	....	1	....	1	....	1
Eighth	....	....	....	....	1	1	....	....
Ninth	1	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	1	....	....	3
Twelfth	1	....	....	....	1	....	....	....
Thirteenth	....	....	....	....	1	....	....	....
Fourteenth	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	1	1	1	....	....	1	....	....
Seventeenth	....	....	....	....	....	....	....	....
Eighteenth	1	....	1	....	....	....	....	....
Nineteenth	....	1	....	....	....	....	....	....
Twentieth	1	....	....	....	1	....	....	....
Twenty-first	....	1	....	....	1	1	....	....
Twenty-second	1	1	1	2	....	....	1	....
Twenty-third	....	....	....	....	1	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	9	6	5	4	8	8	2	4

BRONCHITIS (ACUTE AND CHRONIC).

Color, Sex, Wards and Calendar Months, Year 1906.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
2	....	....	....	....	1	....	....	1	2	....	....	....	....	....	....
....	1	....	....	1	....	....	....	....	....	....	....	1	1	....	....
....	....	....	....	1	....	....	....	....	....	....	....	....	....	1	....
....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	1	....	....	....	....	2	1	....	....	....	....	1
....	....	....	....	....	....	....	....	1	1	....	1	....	....	....	....
1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2	....	....	....	....	1	....	....	1	....	....	1	....	....	....	....
1	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....
....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....
....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
3	2	....	....	....	....	....	2	....	....	....	1	....	....	....	....
....	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	2	....	....	....	1	....	....	....	....	....	....	....	....	....
....	1	....	1	....	....	1	....	....	1	....	1	....	....	....	....
....	2	....	....	1	....	....	....	....	1	....	....	1	2	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11	10	2	4	6	5	4	2	3	8	2	5	2	3	1	1

Continued on next page.

BRONCHITIS (ACUTE AND CHRONIC).

Table No. 1 (Continued)—*Showing Deaths According*

Wards.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....	....	....	....	....
Second	....	....	....	....	1	....	....	....	....	....	....	....
Third	....	....	....	....	1	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	1	....
Fifth	....	....	....	1	....	....	....	....	2	....	2	....
Sixth	....	....	....	....	....	....	....	....	....	....	....	....
Seventh	....	....	1	....	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	1	1	....	....
Eleventh	....	....	....	....	....	1	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	1	....	....	....	....	....
Sixteenth	....	....	....	1	....	....	1	1	....	....	....	1
Seventeenth	....	....	....	....	....	....	....	....	....	....	1	....
Eighteenth	....	....	....	....	....	....	....	....	1	....	....	....
Nineteenth	1	....	....	....	....	....	....	....	....	....	1	....
Twentieth	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....	....	....	1	....
Twenty-second	1	....	....	1	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	2	....	1	3	2	1	2	1	4	1	6	1

BRONCHITIS (ACUTE AND CHRONIC).

to Color, Sex, Wards and Calendar Months, Year 1906.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	2	....	....	....	1	....	....	1	4	....	....
2	....	....	....	....	....	....	....	....	....	....	....	7	5	....	....
1	....	....	....	1	....	....	....	....	1	....	....	6	5	....	....
1	....	1	1	....	....	....	1	1	....	2	1	3	1	8	4
2	....	....	....	....	1	1	1	....	1	....	....	4	2	4	2
....	....	....	....	1	....	....	....	1	....	1	....	4	1	1	....
....	....	....	....	....	....	....	....	1	....	....	....	2	4	2	3
....	....	....	....	....	1	....	....	1	....	....	....	3	3	....	1
....	....	....	....	1	....	....	....	....	2	....	....	3	3	....	....
....	3	....	....	2	....	....	....	1	1	....	1	7	6	....	2
....	....	1	....	....	....	....	....	....	....	....	....	2	1	2	4
....	....	....	....	....	....	....	....	....	....	....	....	2	1	....	1
....	....	....	....	....	1	....	....	1	....	1	....	2	1	1	....
....	....	....	....	....	....	1	....	....	1	....	....	1	1	1	....
....	1	....	....	....	....	....	1	....	1	....	....	....	3	1	1
....	1	1	....	....	....	....	1	....	....	1	....	2	3	4	5
....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	2
....	....	....	....	1	1	....	....	....	....	....	....	6	3	1	3
....	....	....	....	....	1	....	....	....	....	....	1	1	3	2	1
....	....	....	....	....	....	....	....	1	....	....	....	3	....	....	....
1	....	....	....	1	....	....	....	2	....	....	....	5	4	1	....
....	....	....	1	....	....	1	....	....	....	....	1	2	1	6	5
....	....	1	....	....	....	1	....	....	....	....	....	1	2	3	2
....	....	....	....	....	....	....	....	1	....	....	....	3	5	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
7	5	4	3	7	7	4	4	10	8	5	4	71	62	38	36

BRONCHITIS (ACUTE AND CHRONIC).

TABLE No. 2—*Showing Deaths According to*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	2	1	....	....	....	....	....	....
Bet. 1 and 3 mos	....	1	1	....	2	1	....	....
Bet. 3 and 12 mos	1	1	2	1	....	2	....	....
Bet. 1 and 2 yrs	1	....	....	....	....	....	1	2
Bet. 2 and 3 yrs	....	....	....	....	....	....	1	1
Bet. 3 and 4 yrs	....	1	....	....	....	....	....	1
Bet. 4 and 5 yrs	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs	1	....	1	....	....	....	....	....
Bet. 10 and 14 yrs	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs	....	....	....	1	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	1	1	1	....	....
Bet. 60 and 64 yrs	....	1	1	....	....	....	....	....
Bet. 65 and 69 yrs	2	....	....	....	1	2	....	....
Bet. 70 and 74 yrs	1	1	....	1	1	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	2	....	....	....
Bet. 80 and 84 yrs	1	....	....	....	1	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	1	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Bet. 100 and 110 yrs	....	....	....	....	....	1	....	....
Total	9	6	5	4	8	8	2	4

BRONCHITIS (ACUTE AND CHRONIC).

Age, Color, Sex, and Calendar Months, Year 1906.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	....	....	1	....	....	1	....	....	....	1	....	....
2	3	....	1	....	1	1	....	1	1	....	1	....	1	....	1
1	3	1	1	3	1	1	....	....	1	1	2	....	....	....	....
....	....	....	1	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	1	....	....	....	....	....	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	1	....	....	....	....	1	....	....	1	....	....	....	....
....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....
1	1	....	....	....	1	1	....	....	....	....	...	....	....	....	....
....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	1	....	....	2	1	....	....
....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....
3	....	....	....	1	2	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11	10	2	4	6	5	4	2	3	8	2	5	2	3	1	1

Continued on next page

BRONCHITIS (ACUTE AND CHRONIC).

TABLE NO. 2 (Continued)—*Showing Deaths According*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....	2	....	1	....
Bet. 1 and 3 mos.	....	....	....	....	....	....	2	....	....	....	....	....
Bet. 3 and 12 mos.	....	....	....	1	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs.	....	....	....	....	....	1	....	....	....	....	1	....
Bet. 2 and 3 yrs.	....	....	....	....	....	....	....	1	....	....	....	....
Bet. 3 and 4 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs.	....	....	....	1	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs.	....	....	....	....	....	....	....	....	....	....	1	....
Bet. 15 and 19 yrs.	....	....	....	....	....	....	....	....	....	....	....	1
Bet. 20 and 24 yrs.	....	....	....	1	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs.	....	....	....	....	2	....	....	....	....	....	....	....
Bet. 30 and 34 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs.	....	....	....	....	....	....	....	....	....	....	2	....
Bet. 40 and 44 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs.	....	....	....	....	....	....	....	....	....	....	1	....
Bet. 55 and 59 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs.	2	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs.	....	....	1	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs.	....	....	....	....	....	....	....	....	1	....	....	....
Bet. 80 and 84 yrs.	....	....	....	....	....	....	....	....	1	....	....	....
Bet. 85 and 89 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs.	....	....	....	....	....	....	....	....	....	1	....	....
Bet. 95 and 99 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 100 and 110 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Total........	2	....	1	3	2	1	2	1	4	1	6	1

BRONCHITIS (ACUTE AND CHRONIC).

to Age, Color, Sex and Calendar Months, Year 1906.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1	....	....	....	1	....	1	....	1	1	1	....	9	3	3	....
3	....	....	1	....	....	....	....	3	1	1	....	8	6	5	1
1	2	1	....	1	1	1	1	....	....	1	2	6	12	6	8
....	....	....	....	....	1	....	1	....	....	1	....	5	7	6	6
....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	3
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
....	....	1	....	....	....	....	....	....	....	....	....	....	....	2	....
1	....	....	....	....	....	....	....	....	....	....	....	2	1	1	1
....	....	....	....	....	....	....	1	....	....	....	....	....	....	1	1
....	....	1	....	....	....	....	....	....	....	....	....	....	....	2	3
....	....	....	1	....	....	1	....	....	....	....	....	....	....	1	2
....	....	....	....	....	....	....	1	....	....	....	....	2	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	2
....	....	....	....	....	....	....	....	....	....	1	....	....	....	4	....
....	....	....	1	....	....	....	....	....	....	....	1	....	....	....	2
....	....	1	....	....	1	....	....	....	....	....	....	....	1	1	1
....	....	....	....	....	....	....	....	1	....	....	....	1	....	1	....
....	....	....	....	....	1	....	....	....	....	....	....	2	3	....	1
....	....	....	....	....	....	....	....	....	1	....	....	3	4	2	....
....	....	....	....	2	....	....	....	1	....	....	....	6	4	1	....
1	....	....	....	1	1	....	....	2	2	....	....	9	6	....	1
....	....	....	....	1	1	1	....	1	2	....	....	5	3	1	1
....	1	....	....	....	1	....	....	....	1	....	....	7	5	....	....
....	2	....	....	1	....	....	....	1	....	....	1	3	3	....	1
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
7	5	4	3	7	7	4	4	10	8	5	4	71	62	38	36

ALIMENTARY

TABLE NO. 1—*Showing Deaths by*

MONTHS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
January	...	...	...	....	...	...	2	....	5	...	...	1
February	...	...	...	....	2	1	...	1	1	...	...	....
March	...	1	...	....	2	2	...	1	5	1	...	....
April	1	...	...	....	...	3	...	....	2	5	2	....
May	1	2	...	....	3	4	2	....	3	4	...	....
June	1	...	...	1	6	5	...	....	18	20	7	4
July	2	4	...	2	9	6	4	3	65	44	13	14
August	4	1	3	1	13	10	5	3	21	30	7	4
September	4	...	1	1	9	5	...	1	22	16	3	3
October	...	1	1	....	4	3	2	....	7	6	4	1
November	1	...	1	....	2	1	2	....	4	4	...	1
December	...	...	...	....	1	1	...	1	1	3	...	2
Total	14	9	6	5	51	41	17	10	154	133	36	30

CANAL.

Months, Age, Color and Sex, Year 1913.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.				Grand Total.
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
...	...	...	1	1	...	...	....	...	...	...	....	...	...	...	....	6	...	2	2	10
...	1	...	....	...	1	...	....	...	...	...	....	...	...	...	....	3	3	...	1	7
...	2	...	....	...	2	...	1	...	...	...	....	...	...	...	....	7	8	...	2	17
2	...	...	1	...	1	...	....	...	...	...	....	...	...	...	....	5	9	2	1	17
1	1	2	....	...	1	...	....	...	...	...	....	...	...	...	....	8	12	4	....	24
3	3	1	1	...	2	...	....	...	...	...	....	...	...	...	....	28	30	8	6	72
22	7	...	5	1	2	...	....	...	...	...	....	...	...	...	....	99	63	17	24	203
8	4	1	....	...	...	1	....	...	...	...	....	1	...	1	....	47	45	18	8	118
5	3	...	1	1	...	1	....	...	...	...	....	...	...	...	....	41	24	5	6	76
1	2	...	....	...	...	...	....	...	...	...	....	...	...	...	....	12	12	7	1	32
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	8	5	3	1	17
2	2	...	....	...	...	...	....	...	...	...	....	...	...	...	....	4	6	...	3	13
45	25	4	9	3	9	2	1	...	...	...	....	1	...	1	....	268	217	66	55	606

ALIMENTARY

TABLE NO. 2—*Showing Deaths by*

WARDS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	...	1	...	....	4	6	...	....	18	22	...	1
Second	1	...	...	....	6	...	1	....	23	10	...	1
Third	1	...	...	....	6	1	...	....	8	7	...	....
Fourth	2	...	1	....	...	...	...	....	5	1	4	1
Fifth	...	...	...	1	...	1	...	....	...	3	1	1
Sixth	1	...	...	1	1	2	2	....	5	4	4	1
Seventh	1	...	...	....	5	2	...	....	6	6	...	....
Eighth	...	...	...	....	...	1	1	....	6	6	...	1
Ninth	1	...	...	....	...	2	...	....	3	...	1	....
Tenth	...	2	...	....	...	2	...	1	1	1	1	....
Eleventh	...	...	...	1	...	1	1	1	1	...	...	3
Twelfth	...	...	...	....	...	...	1	....	3	4	5	1
Thirteenth	...	2	...	....	2	2	1	....	5	5	...	....
Fourteenth	1	3	1	....	7	8	1	4	7	4	2	2
Fifteenth	...	...	1	....	...	1	4	....	4	2	4	3
Sixteenth	...	...	...	....	1	...	...	....	3	1	2	5
Seventeenth	...	...	2	....	1	...	2	1	...	...	3	4
Eighteenth	2	...	...	....	3	1	1	2	8	6	3	4
Nineteenth	1	...	...	....	1	2	...	....	7	5	...	1
Twentieth	...	...	...	....	3	1	...	....	9	9	...	....
Twenty-first	...	...	...	....	3	2	1	....	12	10	5	....
Twenty-second	1	...	1	1	...	2	...	....	3	3	1	1
Twenty-third	...	...	...	1	4	...	1	1	2	8	...	....
Twenty-fourth	2	1	...	....	4	4	...	....	15	16	...	....
Total	14	9	6	5	51	41	17	10	154	133	36	30

CANAL.

Wards, Age, Color and Sex, Year 1913.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.				Grand Total.
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
7	3	...	....	...	2	...	....	...	...	...	....	...	...	...	....	29	34	...	1	64
5	6	...	1	1	...	...	....	...	...	...	....	...	...	...	....	36	16	1	2	55
2	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	17	9	...	....	26
1	1	...	1	1	1	...	....	...	...	...	....	...	...	...	....	9	3	5	2	19
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	4	1	2	7
1	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	8	7	6	2	23
3	2	...	....	...	...	...	....	...	...	...	....	...	...	...	....	15	10	...	....	25
1	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	7	8	1	1	17
...	...	...	....	...	1	...	....	...	...	...	....	...	...	...	....	4	3	1	....	8
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	5	1	1	9
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	1	1	5	8
3	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	6	4	6	1	17
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	8	9	1	....	18
2	...	1	....	...	1	...	1	...	...	...	....	...	...	...	....	17	16	5	7	45
2	1	...	1	...	1	...	....	...	...	...	....	...	...	...	....	6	5	9	4	24
2	...	...	2	...	...	...	....	...	...	...	....	...	...	...	....	6	1	2	7	16
...	...	...	1	...	...	1	....	...	...	...	....	...	...	...	....	1	...	8	6	15
1	1	...	2	...	...	...	....	...	...	...	....	...	...	...	....	14	8	4	8	34
1	2	1	....	1	...	...	....	...	...	...	....	...	...	...	....	11	9	1	1	22
1	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	13	11	...	....	24
4	2	1	....	...	...	...	....	...	...	...	....	...	...	...	....	19	14	7	....	40
...	...	...	1	...	...	...	....	...	...	...	....	...	...	1	....	4	5	3	8	15
...	...	1	....	...	1	1	....	...	...	...	....	...	...	...	....	6	9	3	2	20
7	3	...	....	...	2	...	....	...	...	...	....	1	...	...	....	29	26	...	....	55
45	25	4	9	3	9	2	1	...	...	...	....	1	...	1	....	268	217	66	55	606

GASTRO

TABLE NO. 2-A—*Showing Deaths by Age,*

MONTHS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
January	...	...	...	...	...	...	2	...	1	...	...	...
February	...	...	...	...	1	1	...	...	...	...	...	...
March	...	...	...	...	1	1	...	...	2	1	...	...
April	1	...	...	...	...	1	...	...	...	1	...	...
May	...	2	...	...	2	2	...	...	1	1	...	...
June	...	...	...	...	1	1	...	...	5	11	5	3
July	1	...	...	1	2	...	1	1	14	18	3	2
August	...	...	2	...	5	6	2	1	7	8	3	...
September	2	...	1	...	1	1	...	1	11	6	1	...
October	...	...	...	...	1	1	...	...	4	1	1	1
November	...	...	...	...	...	...	1	...	3	1	...	1
December	...	...	...	...	1	...	...	1	1	1	...	...
Total	4	2	3	1	15	14	6	4	49	49	13	7

ENTERITIS.

Color, Sex and Months, Year 1913.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.			
White.		Colored.		White.		Colored.		White.		Colored		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	....	2	....
...	1	...	....	...	1	...	....	...	...	...	....	...	...	...	....	1	3	....	....
...	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	3	....	....
2	...	...	1	...	1	...	....	...	...	...	....	...	...	...	....	3	3	....	1
1	...	1	....	...	...	...	....	...	...	...	....	...	...	...	....	4	5	1	....
1	...	...	....	...	1	...	....	...	...	...	....	...	...	...	....	7	13	5	3
7	1	...	1	...	...	...	....	...	...	...	....	...	...	...	....	24	19	4	5
1	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	13	15	7	1
3	1	...	1	1	...	1	....	...	...	...	....	...	...	...	....	18	8	3	2
...	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	5	3	1	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	1	1	1
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	1	....	1
16	6	1	3	1	3	1	....	...	...	...	....	.	...	...	....	85	74	24	15

GASTRO

TABLE No. 2-B—*Showing Deaths by*

WARDS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	...	...	...	....	...	2	...	....	6	11	...	1
Second	...	...	...	....	3	...	1	....	7	2	...	....
Third	...	...	...	....	2	1	...	....	5	3	...	....
Fourth	...	...	1	....	...	...	...	....	...	...	1	....
Fifth	...	...	...	....	...	...	...	....	...	3	1	1
Sixth	...	...	...	....	...	1	...	....	1	3	...	....
Seventh	...	...	...	....	2	1	...	....	4	1	...	....
Eighth	...	...	...	....	...	...	...	....	3	3	...	....
Ninth	1	...	...	....	...	1	...	....	1	...	1	....
Tenth	...	...	...	....	...	...	...	1	...	1	...	....
Eleventh	...	...	...	1	...	...	...	....	1	...	...	....
Twelfth	...	...	...	....	...	...	...	....	1	3	3	....
Thirteenth	...	...	...	....	...	...	...	....	2	...	...	....
Fourteenth	1	2	...	....	4	4	...	2	4	2	1	....
Fifteenth	...	...	1	....	...	...	1	....	1	1	3	2
Sixteenth	...	...	...	....	...	...	...	....	1	...	...	2
Seventeenth	...	...	1	....	...	...	2	1	...	...	1	....
Eighteenth	2	...	...	....	...	...	1	....	1	2	...	....
Nineteenth	...	...	...	....	...	...	...	....	2	1	...	1
Twentieth	...	...	...	....	1	1	...	....	1	4	...	....
Twenty-first	...	...	...	....	...	1	1	....	4	3	1	....
Twenty-second	...	...	...	....	...	2	...	....	...	1	1	....
Twenty-third	...	...	...	....	2	...	...	....	...	3	...	....
Twenty-fourth	...	...	...	....	1	...	...	....	4	2	...	....
Total	4	2	3	1	15	14	6	4	49	49	13	7

ENTERITIS.

Wards, Age, Color and Sex, Year 1913.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.				Grand Total.
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
4	1	...	....	...	1	...	....	...	...	...	....	...	...	...	....	10	15	...	1	26
...	1	...	....	1	...	...	....	...	...	...	....	...	...	...	....	11	3	1	....	15
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	7	4	...	....	11
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	2	....	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	3	1	1	5
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	4	...	....	5
1	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	7	3	...	....	10
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	3	...	....	6
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	1	1	....	4
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	1	...	1	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	...	...	1	2
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	3	3	....	8
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	...	...	....	2
2	...	1	....	...	1	...	....	...	...	...	....	...	...	...	....	11	9	2	2	24
...	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	2	5	2	10
...	...	...	1	...	...	...	....	...	...	...	....	...	...	...	....	1	...	...	3	4
...	...	...	1	...	...	...	....	...	...	...	....	...	...	...	....	...	...	4	2	6
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	4	2	1	....	7
1	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	2	...	1	6
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	5	...	....	7
4	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	8	5	2	....	15
...	...	...	1	...	...	...	....	...	...	...	....	...	...	...	....	...	3	1	1	5
...	...	...	....	...	1	1	....	...	...	...	....	...	...	...	....	2	4	1	....	7
2	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	7	2	...	....	9
16	6	1	3	1	3	1	....	...	...	...	....	...	...	...	....	85	74	24	15	198

COLITIS AND

TABLE NO. 2-C—*Showing Deaths by*

MONTHS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
January	...	...	...	....	...	...	...	....	1	...	...	....
February	...	...	...	....	...	...	...	....	...	...	...	....
March	...	...	...	....	...	...	...	....	...	...	...	....
April	...	...	...	....	...	...	...	....	...	...	...	....
May	...	...	...	....	...	...	...	....	...	...	...	....
June	...	...	...	....	...	...	...	....	...	...	...	....
July	...	...	...	....	...	...	...	....	...	...	1	....
August	...	...	...	....	...	...	...	....	...	...	...	....
September	...	...	...	....	...	...	...	....	...	...	...	....
October	...	...	...	....	...	...	...	....	...	...	...	....
November	...	...	...	....	...	...	...	....	...	...	...	....
December	...	...	...	....	...	...	...	....	...	...	...	....
Total	...	...	...	....	...	...	...	....	1	...	1	....

SUMMER COMPLAINT.

Months, Age, Color and Sex, Year 1913.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	....	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	....	....
...	...	...	....	...	1	...	....	...	...	...	....	...	...	...	....	....	1	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	1	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	....	....
...	...	...	....	...	1	...	....	...	...	...	....	...	...	...	....	1	1	1	....

COLITIS AND

Table No. 2-D—*Showing Deaths by*

Wards.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	...	...	...	....	...	...	...	....	...	...	...	....
Second	...	...	...	....	...	...	...	....	...	...	...	....
Third	...	...	...	....	...	...	...	....	...	...	...	....
Fourth	...	...	...	....	...	...	...	....	...	...	...	....
Fifth	...	...	...	....	...	...	...	....	...	...	...	....
Sixth	...	...	...	....	...	...	...	....	...	...	...	....
Seventh	...	...	...	....	...	...	...	....	...	...	...	....
Eighth	...	...	...	....	...	...	...	....	...	...	...	....
Ninth	...	...	...	....	...	...	...	....	...	...	...	....
Tenth	...	...	...	....	...	...	...	....	...	...	...	....
Eleventh	...	...	...	....	...	...	...	....	...	...	...	....
Twelfth	...	...	...	....	...	...	...	....	...	...	...	....
Thirteenth	...	...	...	....	...	...	...	....	...	...	...	....
Fourteenth	...	...	...	....	...	...	...	....	...	...	...	....
Fifteenth	...	...	...	....	...	...	...	....	...	...	...	....
Sixteenth	...	...	...	....	...	...	...	....	...	...	...	....
Seventeenth	...	...	...	....	...	...	...	....	...	...	...	....
Eighteenth	...	...	...	....	...	...	...	....	1	...	1	....
Nineteenth	...	...	...	....	...	...	...	....	...	...	...	....
Twentieth	...	...	...	....	...	...	...	....	...	...	...	....
Twenty-first	...	...	...	....	...	...	...	....	...	...	...	....
Twenty-second	...	...	...	....	...	...	...	....	...	...	...	....
Twenty-third	...	...	...	....	...	...	...	....	...	...	...	....
Twenty-fourth	...	...	...	....	...	...	...	....	...	...	...	....
Total	...	...	...	....	...	...	...	....	1	...	1	....

SUMMER COMPLAINT.

Wards, Age, Color and Sex, Year 1913.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.				Grand Total.
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
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...	...	...	....	...	1	...	....	...	...	...	....	...	...	...	....	1	1	1	....	3

DIARRHOEA.

TABLE NO. 2-E—*Showing Deaths by*

MONTHS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
January	...	...	...	....	...	...	...	....	1	...	...	....
February	...	...	...	....	1	...	...	....	...	...	...	....
March	...	1	...	....	...	...	...	....	...	...	...	....
April	...	...	...	....	...	...	...	....	...	...	...	....
May	...	...	...	....	...	...	1	....	...	1	...	....
June	...	...	...	....	2	2	...	....	3	2	1	....
July	...	...	...	....	2	...	...	....	6	2	1	2
August	...	...	...	....	1	2	1	1	3	3	...	....
September	2	...	...	....	1	1	...	....	1	2	...	....
October	...	...	...	....	...	...	1	....	...	1	...	....
November	...	...	...	....	...	...	...	....	1	...	...	....
December	...	...	...	....	...	...	...	....	...	...	...	....
Total	2	1	...	....	7	5	3	1	15	11	2	2

DIARRHOEA.

Months, Age, Color and Sex, Year 1913.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	....	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	....	....	....
...	1	...	....	...	1	...	....	...	...	...	....	...	...	...	....	....	3	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	....	....
...	...	...	....	...	1	...	....	...	...	...	....	...	...	...	....	....	2	1	....
...	...	1	1	...	...	...	....	...	...	...	....	...	...	...	....	5	4	2	1
...	...	...	1	...	...	...	....	...	...	...	....	...	...	...	....	8	2	1	3
...	1	...	....	...	...	...	....	...	...	...	....	...	...	1	....	4	6	2	1
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	5	3	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	1	1	....
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	....	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	....	....
2	2	1	2	...	2	...	....	...	...	...	....	...	...	1	....	26	21	7	5

DIARRHOEA.

TABLE NO. 2-F—*Showing Deaths by*

WARDS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	...	1	...	....	1	2	...	....	1	1	...	....
Second	...	...	...	....	1	...	...	....	3	1	...	1
Third	...	...	...	....	2	...	...	....	1	1	...	....
Fourth	1	...	...	....	...	...	...	....	...	...	...	....
Fifth	...	...	...	....	...	...	...	....	...	...	...	....
Sixth	1	...	...	....	...	...	1	....	...	...	...	1
Seventh	...	...	...	....	...	...	...	....	...	...	...	....
Eighth	...	...	...	....	...	...	...	....	...	...	...	....
Ninth	...	...	...	....	...	...	...	....	...	...	...	....
Tenth	...	...	...	....	...	...	...	....	...	...	...	....
Eleventh	...	...	...	....	...	...	...	....	...	...	...	....
Twelfth	...	...	...	....	...	...	1	....	...	...	...	....
Thirteenth	...	...	...	....	...	...	...	....	...	...	...	....
Fourteenth	...	...	...	....	...	...	...	....	...	...	...	....
Fifteenth	...	...	...	....	...	1	1	....	...	...	...	....
Sixteenth	...	...	...	....	...	...	...	....	2	...	...	....
Seventeenth	...	...	...	....	...	...	...	....	...	...	1	....
Eighteenth	...	...	...	....	...	...	...	....	...	...	...	....
Nineteenth	...	...	...	....	1	...	...	....	2	...	...	...
Twentieth	...	...	...	....	1	...	...	....	2	1	...	....
Twenty-first	...	...	...	....	...	1	...	....	1	1	1	...
Twenty-second	...	...	...	....	...	...	...	....	1	1	...	....
Twenty-third	...	...	...	....	1	...	...	1	...	...	...	....
Twenty-fourth	...	...	...	....	...	1	...	....	2	5	...	...
Total	2	1	...	....	7	5	3	1	15	11	2	2

DIARRHOEA.

Wards, Age, Color and Sex, Year 1913.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.				Grand Total.
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	4	...	....	6
2	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	6	2	...	1	9
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	1	...	....	4
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	...	...	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	...	1	1	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....
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...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....
...	...	...	1	...	...	...	....	...	...	...	....	...	...	...	....	...	1	1	1.	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	...	...	....	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	1	....	1
...	...	...	1	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	1	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	...	...	....	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	1	...	....	4
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	2	1	....	4
...	...	...	....	...	...	...	....	...	...	...	....	...	...	1	....	1	1	1	....	3
...	...	1	....	...	...	...	....	...	...	...	....	...	...	...	....	1	...	1	1	3
...	1	...	....	...	2	...	....	...	...	...	....	...	...	...	....	2	9	...	....	11
2	2	1	2	...	2	...	....	...	...	...	....	...	...	1	....	26	21	7	5	59

GASTRITIS.

TABLE NO. 2-G- *Showing Deaths by*

MONTHS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
January	...	...	...	....	...	...	...	....	...	...	...	1
February	...	...	...	....	...	...	...	....	...	...	...	....
March	...	...	...	....	...	...	...	....	...	...	...	....
April	...	...	...	....	...	...	...	....	...	2	...	....
May	...	...	...	....	...	1	...	....	...	1	...	....
June	...	...	...	....	...	...	...	....	...	...	...	....
July	...	...	...	1	...	1	...	....	3	...	...	....
August	1	...	...	....	...	...	...	....	...	1	...	....
September	...	...	...	1	...	...	...	....	1	...	...	....
October	...	...	...	....	...	...	...	....	...	...	...	....
November	...	...	...	....	1	...	...	....	...	...	...	....
December	...	...	...	....	...	...	...	....	...	...	...	....
Total	1	...	...	2	1	2	...	....	4	4	...	1

GASTRITIS.

Months, Age, Color and Sex, Year 1913.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	....	1
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...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	1	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	1	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	....	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	....	....
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...	...	1	....	...	...	...	....	...	...	...	....	...	...	...	....	6	6	1	3

GASTRITIS.

TABLE NO. 2-H—*Showing Deaths by*

WARDS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	...	...	...	....	1	1	...	....	2	1	...	....
Second	...	...	...	....	...	...	...	....	...	1	...	....
Third	1	...	...	....	...	...	...	....	...	...	...	....
Fourth	...	...	...	....	...	...	...	....	...	...	...	....
Fifth	...	...	...	1	...	1	...	....	...	...	...	....
Sixth	...	...	...	1	...	...	...	....	...	...	...	....
Seventh	...	...	...	....	...	...	...	....	...	...	...	....
Eighth	...	...	...	....	...	...	...	....	...	...	...	....
Ninth	...	...	...	....	...	...	...	....	...	...	...	....
Tenth	...	...	...	....	...	...	...	....	...	...	...	....
Eleventh	...	...	...	....	...	...	...	....	...	...	...	1
Twelfth	...	...	...	....	...	...	...	....	...	...	...	....
Thirteenth	...	...	...	....	...	...	...	....	...	...	...	....
Fourteenth	...	...	...	....	...	...	...	....	...	...	...	....
Fifteenth	...	...	...	....	...	...	...	....	...	...	...	....
Sixteenth	...	...	...	....	...	...	...	....	...	...	...	....
Seventeenth	...	...	...	....	...	...	...	....	...	...	...	....
Eighteenth	...	...	...	....	...	...	...	....	...	...	...	....
Nineteenth	...	...	...	....	...	...	...	....	...	1	...	....
Twentieth	...	...	...	....	...	...	...	....	...	...	...	....
Twenty-first	...	...	...	....	...	...	...	...	2	...	...	....
Twenty-second	...	...	...	....	...	...	...	....	...	...	...	....
Twenty-third	...	...	...	....	...	...	...	....	...	1	...	....
Twenty-fourth	...	...	...	....	...	...	...	....	...	...	...	....
Total	1	...	...	2	1	2	...	....	4	4	...	1

GASTRITIS.

Wards, Age, Color and Sex, Year 1913.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.				Grand Total.
White.		Colored.		White.		Colored.		White.		Colored		White.		Colored.		White.		Colored.		
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	2	...	....	5
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	1	...	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	...	...	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	1	...	1	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	1	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....
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...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	1	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....
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...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	1	...	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....
...	...	1	....	...	...	...	....	...	...	...	....	...	...	...	....	2	...	1	...	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	1	...	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....
...	...	1	....	...	...	...	....	...	...	...	....	...	...	...	....	6	6	1	3	16

ENTERITIS.

TABLE No. 2-I—*Showing Deaths by*

Months.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
January	...	...	...	....	...	...	...	....	...	...	...	....
February	...	...	...	....	...	...	...	1	1	...	...	....
March	...	...	...	....	1	...	...	....	1	...	...	....
April	...	...	...	....	...	...	...	....	...	2	2	....
May	1	...	...	....	...	...	...	....	...	...	...	....
June	...	...	...	1	2	1	...	....	3	2	1	....
July	...	1	...	....	1	2	...	2	4	6	4	2
August	3	...	...	....	3	...	2	....	2	2	2	1
September	...	...	...	....	2	...	...	....	4	1	1	2
October	...	1	...	....	...	...	1	....	1	...	1	....
November	1	...	1	....	...	1	...	....	...	2	...	....
December	...	...	...	....	...	1	...	....	...	1	...	1
Total	5	2	1	1	9	5	3	3	16	16	11	6

ENTERITIS.

Months, Age, Color and Sex, Year 1913.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
...	...	...	1	1	...	...	....	...	...	...	....	...	...	...	....	1	....	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	....	....	1
...	...	...	....	...	...	...	1	...	...	...	....	...	...	...	....	2	....	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	2	2	....
...	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	1	....	....
1	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	6	4	1	1
2	...	...	....	...	1	...	....	...	...	...	....	...	...	...	....	7	10	4	4
1	1	...	....	...	...	...	....	...	...	...	....	1	...	...	....	10	3	4	1
1	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	7	2	1	2
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	1	2	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	3	1	....
1	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	3	....	1
7	5	...	1	1	1	...	1	...	...	...	....	1	...	...	....	39	29	15	12

ENTERITIS.

TABLE No. 2 J—*Showing Deaths by*

Wards.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	...	...	...	....	1	1	...	....	4	4	...	....
Second	1	...	...	....	1	...	...	....	2	...	...	....
Third	...	...	...	....	...	...	...	....	1	2	...	....
Fourth	1	...	...	....	...	...	...	....	2	...	2	1
Fifth	...	...	...	....	...	...	...	....	...	...	...	....
Sixth	...	...	...	....	...	...	...	....	2	1	4	....
Seventh	...	...	...	....	...	...	...	....	...	2	...	....
Eighth	...	...	...	....	...	...	...	....	...	...	...	....
Ninth	...	...	...	....	...	...	...	....	...	...	...	....
Tenth	...	...	...	....	...	...	...	....	1	...	...	....
Eleventh	...	...	...	....	...	...	1	1	...	...	...	1
Twelfth	...	...	...	....	...	...	...	....	...	...	1	....
Thirteenth	...	...	...	....	...	...	...	....	...	...	...	....
Fourteenth	...	1	...	....	4	2	...	1	1	1	1	....
Fifteenth	...	...	...	....	...	...	1	....	...	...	...	....
Sixteenth	...	...	...	....	...	...	...	....	...	...	...	2
Seventeenth	...	...	1	....	...	...	...	....	...	...	...	2
Eighteenth	...	...	...	....	...	...	...	1	...	1	...	....
Nineteenth	...	...	...	....	...	1	...	....	...	...	...	....
Twentieth	...	...	...	....	...	...	...	....	1	2	...	....
Twenty-first	...	...	...	....	2	...	...	....	...	...	3	....
Twenty-second	1	...	...	....	...	...	...	....	...	...	...	....
Twenty-third	...	...	...	1	...	...	1	....	...	...	...	....
Twenty-fourth	2	1	...	....	1	1	...	....	2	3	...	....
Total	5	2	1	1	9	5	3	3	16	16	11	6

ENTERITIS.

Wards, Age, Color and Sex, Year **1913.**

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.				Grand Total.
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1	1	...	....	...	1	...	....	...	...	...	....	...	...	...	....	6	7	...	....	13
...	1	...	1	...	...	...	....	...	...	...	....	...	...	...	....	4	1	...	1	6
2	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	2	...	....	5
...	1	...	....	1	...	...	....	...	...	...	....	...	...	...	....	4	1	2	1	8
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....
...	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	2	4	....	8
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	2	...	....	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	...	...	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	1	2	3
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	...	1	....	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....
...	...	...	....	...	...	...	1	...	...	...	....	...	...	...	....	5	4	1	2	12
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	1	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	2	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	1	2	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	1	...	1	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	1	...	....	1
1	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	3	...	....	5
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	...	3	....	5
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	...	...	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	1	1	2
2	...	...	....	...	...	...	....	...	...	...	....	1	...	...	....	8	5	...	....	13
7	5	...	1	1	1	...	1	...	...	...	....	1	...	...	....	39	29	15	12	95

CHOLERA

TABLE No. 2-K—*Showing Deaths by*

MONTHS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
January	...	...	...	....	...	...	...	....	...	...	...	....
February	...	...	...	....	...	...	...	....	...	...	...	....
March	...	...	...	....	...	...	...	1	...	...	...	....
April	...	...	...	....	...	...	...	....	...	...	...	....
May	...	...	...	....	...	...	...	...	1	...	...	....
June	...	...	...	....	1	1	...	....	3	1	...	....
July	1	2	...	....	2	3	2	....	21	12	3	4
August	...	...	...	1	1	...	...	....	3	8	...	1
September	...	...	...	....	1	1	...	....	1	3	...	....
October	...	...	...	....	...	...	...	....	...	...	...	....
November	...	...	...	....	...	...	...	....	...	...	...	....
December	...	...	...	....	...	...	...	....	...	...	...	....
Total	1	2	...	1	5	5	2	1	29	24	3	5

INFANTUM.

Months, Age, Color and Sex, Year 1913.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	....	....	....
...	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	4	3	....	....
3	4	...	....	...	...	...	....	...	...	...	....	...	...	...	....	27	21	5	4
1	...	1	....	...	...	1	....	...	...	...	....	...	...	...	....	5	8	2	2
...	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	5	....	....
...	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	1	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	....	....
4	7	1	....	...	...	1	....	...	...	...	....	...	...	...	....	39	38	7	7

CHOLERA

TABLE No. 2-L.—*Showing Deaths by*

WARDS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First										2		
Second									3	2		
Third					2					1		
Fourth									2			
Fifth												
Sixth							1		1			
Seventh					2	1			2	1		
Eighth						1			1	1		
Ninth						1			2			
Tenth		2										
Eleventh												
Twelfth										1		1
Thirteenth					1				2	3		
Fourteenth							1	1	1			1
Fifteenth									2		1	
Sixteenth										1	1	1
Seventeenth												1
Eighteenth											1	1
Nineteenth	1					1			1	1		
Twentieth									2	1		
Twenty first									3	4		
Twenty second				1					1	2		
Twenty third									1	1		
Twenty fourth						1			5	3		
Total	1	2	...	1	5	5	2	1	29	24	3	5

INFANTUM.

Wards, Age, Color and Sex, Year 1913.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.				Grand Total.
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	3
1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	5	...	...	6
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	3
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	2
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	...	...	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3	...	...	6
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	2	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	1	...	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	3
...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2
...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	1	...	5
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	3
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	5	...	...	8
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	1	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	2
2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7	5	...	...	12
4	7	1	...	...	...	1	...	...	...	...	...	...	...	...	...	39	38	7	7	91

ENTERO

TABLE NO. 2-M—*Showing Deaths by*

MONTHS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
January	...	...	...	....	...	...	...	....	2	...	...	....
February	...	...	...	....	...	...	...	....	...	...	...	....
March	...	...	...	....	...	1	...	....	2	...	...	....
April	...	...	...	....	...	2	...	....	2	...	...	....
May	...	...	...	....	1	1	1	....	1	1	...	....
June	1	...	...	....	...	...	...	....	4	4	...	1
July	...	1	...	....	2	...	1	....	17	6	1	4
August	...	1	1	....	3	2	...	1	6	8	2	2
September	...	...	...	....	4	2	...	....	4	4	1	1
October	...	...	1	....	3	2	...	....	2	4	2	....
November	...	...	...	....	1	...	1	....	...	1	...	....
December	...	...	...	....	...	...	...	....	...	1	...	1
Total	1	2	2	....	14	10	3	1	40	29	6	9

COLITIS.

Months, Age, Color and Sex, Year 1913.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	....	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	....	....	....
...	...	...	....	...	1	...	....	...	...	...	....	...	...	...	....	2	2	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	2	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	2	1	....
1	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	6	5	....	1
10	2	...	3	1	1	...	....	...	...	...	....	...	...	...	....	30	10	2	7
5	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	14	12	3	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	8	6	1	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	5	6	3	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	1	1	....
...	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	2	....	1
16	5	...	3	1	2	...	....	...	...	...	....	...	...	...	....	72	48	11	13

ENTERO

Table No. 2-N—*Showing Deaths by*

Wards.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	...	...	...	....	...	...	...	....	5	3	...	....
Second	...	...	...	....	1	...	...	....	9	4	...	....
Third	...	...	...	....	1	...	...	....	1	...	...	....
Fourth	...	...	...	....	...	...	...	....	1	1	1	....
Fifth	...	...	...	....	...	...	...	....	...	...	...	....
Sixth	...	...	...	....	1	1	...	....	1	...	...	....
Seventh	1	...	...	....	1	...	...	....	...	2	...	....
Eighth	...	...	...	....	...	...	1	....	2	2	...	1
Ninth	...	...	...	....	...	...	...	....	...	...	...	....
Tenth	...	...	...	....	...	2	...	....	...	...	1	....
Eleventh	...	...	...	....	...	1	...	....	...	...	...	1
Twelfth	...	...	...	....	...	...	...	....	2	...	1	....
Thirteenth	...	2	...	....	1	2	1	....	1	2	...	....
Fourteenth	...	...	1	....	...	2	...	....	1	1	...	1
Fifteenth	...	...	...	....	...	...	1	....	...	1	...	1
Sixteenth	...	...	...	....	...	...	...	....	...	...	1	....
Seventeenth	...	...	...	....	1	...	...	....	...	...	1	1
Eighteenth	...	...	...	....	3	1	...	1	6	3	1	3
Nineteenth	...	...	...	....	...	...	...	....	2	2	...	....
Twentieth	...	...	...	....	1	...	...	....	3	1	...	....
Twenty-first	...	...	...	....	1	...	...	....	2	2	...	....
Twenty-second	...	...	1	....	...	...	...	....	1	...	...	1
Twenty-third	...	...	...	....	1	...	...	....	1	2	...	....
Twenty-fourth	...	...	...	....	2	1	...	....	2	3	...	....
Total	1	2	2	....	14	10	3	1	40	29	6	9

COLITIS.

Wards, Age, Color and Sex, Year 1913.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.				Grand Total.
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
2	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	7	3	...	....	10
2	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	12	4	...	....	16
...	1	...	....	...	1	...	....	...	...	...	....	...	...	...	....	2	2	...	....	4
...	...	...	1	...	...	...	....	...	...	...	....	...	...	...	....	1	1	1	1	4
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	1	...	....	4
2	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	4	2	...	....	6
1	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	3	1	1	8
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	2	1	....	4
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	1	...	1	2
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	...	1	....	4
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	6	1	....	10
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	3	1	1	6
2	...	...	....	...	1	...	....	...	...	...	....	...	...	...	....	2	2	1	1	6
2	...	...	1	...	...	...	....	...	...	...	....	...	...	...	....	2	...	1	1	4
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	...	1	1	3
...	1	...	1	...	...	...	....	...	...	...	....	...	...	...	....	9	5	1	5	20
...	1	...	....	1	...	...	....	...	...	...	....	...	...	...	....	3	3	...	....	6
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	4	1	...	....	5
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	2	...	....	5
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	...	1	1	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	2	...	....	4
1	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	5	5	...	....	10
16	5	...	3	1	2	...	....	...	...	...	....	...	...	...	....	72	48	11	13	144

INANITION.

TABLE NO. 3-A—*Showing Deaths by*

MONTHS	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
January	4	1	...	....	1	...	...	....	...	...	...	....
February	...	3	1	....	...	1	...	....	...	...	...	....
March	...	1	...	....	...	1	1	....	1	...	1	....
April	...	1	...	....	...	1	...	....	...	...	...	....
May	...	5	2	1	1	...	...	....	...	1	...	....
June	3	1	...	1	...	1	...	....	...	...	...	....
July	2	...	...	....	1	...	...	1	...	...	...	....
August	2	3	1	....	3	...	...	....	...	...	...	....
September	...	...	...	1	2	...	...	2	1	...	...	....
October	1	...	...	2	1	1	1	....	...	...	...	....
November	3	...	...	....	...	1	...	....	...	...	...	....
December	2	1	3	3	...	...	...	....	1	...	...	....
Total	17	16	7	8	9	6	2	3	3	1	1	....

INANITION.

Months, Age, Color and Sex, Year 1913.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	5	1	....	....
...	..	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	4	1	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	2	2	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....	2	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	6	2	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	2	....	1
...	...	...	....	...	...	...	....	...	1	...	....	...	...	...	....	3	1	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	5	3	1	....
...	...	...	..	...	...	...	....	...	...	...	....	...	...	...	....	3	....	....	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	1	1	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	1	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	1	3	3
...	...	...	....	...	...	...	....	...	1	...	....	...	...	...	....	29	24	10	11

INANITION.

TABLE NO. 3-B—*Showing Deaths by*

WARDS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	1	....	....	1	....	....	....
Second	....	2	....	....	1	....	....	....	1	....	....	....
Third	2	2	....	....	1	....	....	....	....	....	1	....
Fourth	1	....	....	1	1	....	2	....	....	....	....	....
Fifth	....	1	....	....	1	....	....	....	....	....	....	....
Sixth	....	....	1	....	....	....	....	....	....	....	....	....
Seventh	1	1	....	....	....	....	....	....	....	....	....	....
Eighth	2	1	....	....	1	....	....	....	....	1	....	....
Ninth	....	1	....	....	....	....	....	....	....	....	....	....
Tenth	....	1	....	....	....	....	....	....	1	....	....	....
Eleventh	....	1	1	....	....	....	....	1	....	....	....	....
Twelfth	2	1	....	....	....	....	....	1	....	....	....	....
Thirteenth	....	1	....	....	1	....	....	....	....	....	....	....
Fourteenth	2	....	1	4	....	....	....	....	....	....	....	....
Fifteenth	2	....	....	1	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	1	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	1	....	....	....	1	....	....	....	....
Eighteenth	2	1	....	....	....	2	....	....	....	....	....	....
Nineteenth	....	....	....	....	1	2	....	....	....	....	....	....
Twentieth	2	2	....	....	1	1	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-second	....	....	2	....	....	....	....	....	....	....	....	....
Twenty-third	....	....	2	....	....	....	....	....	....	....	....	....
Twenty-fourth	1	1	....	....	1	....	....	....	....	....	....	....
Total	17	16	7	8	9	6	2	3	3	1	1	....

INANITION.

Wards, Age, Color and Sex, Year 1913.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.				Grand Total.
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	1	...	....	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	2	...	....	4
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	2	1	....	6
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	...	2	1	5
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	1	...	....	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	1	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	1	...	....	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	2	...	....	5
...	...	...	....	...	...	...	....	...	1	...	....	...	...	...	....	...	2	...	....	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	1	...	....	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	1	1	1	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	1	...	1	4
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	1	...	....	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	...	1	4	7
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	...	...	1	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	1	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	2	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	3	...	....	5
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	2	...	....	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	3	...	....	6
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	2	....	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	2	....	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	1	...	....	3
...	...	...	....	...	...	...	....	...	1	...	....	...	...	...	....	29	24	10	11	74

INANITION.

TABLE NO. 1-A—*Showing Deaths by*

MONTHS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
January	2	...	1	....	...	...	...	1	...	1	...	1
February	1	5	...	....	1	...	1	....	1	...	...	1
March	1	1	1	1	1	...	...	....	...	2	...	....
April	4	1	1	....	...	...	...	....	2	...	...	1
May	...	2	...	....	...	...	1	1	1	...	...	1
June	4	...	1	2	1	1	...	1	...	...	3	3
July	3	4	1	2	1	1	...	2	1	...	2	1
August	...	1	...	2	1	...	...	1	...	...	3	....
September	5	2	...	1	1	1	...	....	1	1	...	1
October	3	1	...	1	2	1	...	1	2	...	1	....
November	1	...	1	....	2	...	1	2	...	1	1	1
December	2	...	...	1	...	2	2	1	1	...	1	....
Total	26	17	6	10	10	6	5	10	9	5	11	10

INANITION.

Months, Age, Color and Sex, Year 1905.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	1	1	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	5	1	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	3	1	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	6	1	1	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	2	1	2
1	...	...	1	...	...	...	....	...	...	...	....	...	...	...	....	6	1	4	7
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	6	5	3	5
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	1	3	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	7	4	....	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	7	2	1	2
...	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	2	3	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	2	3	2
3	1	...	1	...	...	...	....	...	...	...	....	...	...	...	....	48	29	22	31

INANITION.

TABLE NO. 2-B—*Showing Deaths by*

WARDS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	...	3	...	....	1	...	...	....	1	...	...	....
Second	1	1	...	1	3	1	...	....	2	1	...	....
Third	1	1	1	....	...	...	...	....	1	1	...	....
Fourth	2	1	...	1	1	1	2	2	...	...	...	....
Fifth	1	...	...	....	1	...	...	....	...	...	...	....
Sixth	1	1	...	....	...	1	...	....	...	...	...	....
Seventh	2	4	...	3	...	...	...	....	1	1	...	....
Eighth	...	...	...	....	...	...	...	....	...	...	...	...
Ninth	1	1	...	....	...	...	...	....	...	...	...	....
Tenth	1	...	...	....	...	...	...	....	...	...	...	....
Eleventh	1	1	...	1	...	...	1	....	1	...	...	1
Twelfth	...	...	...	....	...	1	...	....	1	...	1	.
Thirteenth	...	1	...	....	...	1	...	....	...	...	...	....
Fourteenth	...	...	...	....	...	...	...	1	...	1	5	2
Fifteenth	1	1	...	1	...	...	2	....	1	1	1	2
Sixteenth	...	...	...	....	...	...	...	2	1	...	2	2
Seventeenth	1	...	...	....	1	...	...	3	...	...	1	2
Eighteenth	2	...	2	1	1	...	...	2	...	...	...	1
Nineteenth	4	...	1	....	1	...	...	....	...	...	...	....
Twentieth	3	...	...	....	...	...	...	....	...	...	...	....
Twenty-first	...	1	...	....	...	...	...	....	...	...	...	....
Twenty-second	...	1	1	1	1	1	...	....	...	...	1	....
Twenty-third	3	...	1	1	...	...	...	....	...	...	. .	....
Twenty-fourth	...	...	...	....	...	...	...	....	...	...	...	....
Bay View	1	...	...	....	...	...	...	....	...	...	...	....
Total	26	17	6	10	10	6	5	10	9	5	11	10

INANITION.

Wards, Age, Color and Sex, Year 1905.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.				Grand Total.
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	3	...	....	5
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	7	3	...	1	11
...	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	3	1	....	6
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	2	2	3	10
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	...	...	....	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	2	...	....	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	5	...	3	11
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	...	...	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	1	...	....	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	...	...	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	1	1	2	6
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	1	1	....	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	2	...	....	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	1	5	3	9
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	2	3	3	10
...	...	...	1	...	...	...	....	...	...	...	....	...	...	...	....	1	...	2	5	8
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	...	1	5	8
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	...	2	4	9
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	5	...	1	....	6
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	...	...	....	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	1	...	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	2	2	1	6
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	4	...	1	1	6
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	...	...	....	1
3	1	...	1	...	...	...	....	...	...	...	...	...	...	...	....	48	29	22	31	130

INANITION.

TABLE NO. 1-A—*Showing Deaths by*

MONTHS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
January	3	1	4	2	...	1	...	....	...	...	...	....
February	2	...	...	....	2	...	2	1	...	1	...	....
March	2	...	...	....	2	...	1	2	1	...	...	1
April	2	2	1	....	...	1	1	....	1	1	...	....
May	2	2	2	2	1	...	...	1	...	...	...	1
June	6	4	1	1	2	1	1	....	...	...	2	3
July	2	1	...	....	1	...	1	....	2	2	...	2
August	...	1	...	1	1	1	...	1	...	...	...	....
September	...	2	...	2	2	...	...	....	1	...	1	....
October	...	...	...	1	3	1	1	1	3	...	...	1
November	2	4	1	2	...	...	1	....	...	...	...	....
December	...	1	1	....	1	...	...	1	...	...	...	1
Total	21	18	10	11	15	5	8	7	8	4	3	9

INANITION.

Months, Age, Color and Sex, Year 1906.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	2	4	2
1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	5	1	2	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...	1	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	4	2	...
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3	2	4
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	8	6	4	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	3	1	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	2
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	2	1	2
1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	7	1	1	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	4	2	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	2
3	1	...	2	...	1	...	...	...	...	...	...	...	...	...	...	47	29	21	29

INANITION.

TABLE NO. 2-B—*Showing Deaths by*

WARDS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	...	1	...	....	1	...	...	....	...	...	...	....
Second	5	1	1	....	2	...	...	....	...	1	...	....
Third	...	1	...	....	1	...	...	1	2	1	...	1
Fourth	3	1	1	....	...	1	...	1	...	...	1	....
Fifth	...	...	...	....	1	...	...	....	...	...	...	....
Sixth	...	...	1	....	1	...	...	....	...	...	...	....
Seventh	2	...	1	1	...	...	...	....	1	1	...	....
Eighth	1	...	...	....	1	2	...	....	...	...	...	....
Ninth	...	...	...	1	...	...	...	....	1	...	...	....
Tenth	...	...	...	....	...	1	...	....	...	...	...	....
Eleventh	1	...	...	1	1	...	2	....	...	...	...	....
Twelfth	...	...	...	....	1	...	...	....	1	...	...	....
Thirteenth	1	2	...	....	...	...	...	....	...	...	...	....
Fourteenth	2	5	...	....	...	...	...	....	...	1	...	1
Fifteenth	...	1	1	1	...	...	2	2	...	...	...	5
Sixteenth	1	2	...	....	1	...	2	1	...	...	1	1
Seventeenth	1	2	...	2	2	...	...	....	...	...	...	1
Eighteenth	1	...	1	1	...	...	...	....	1	...	1	....
Nineteenth	1	1	1	2	...	...	...	....	...	...	...	....
Twentieth	1	...	...	....	2	1	...	....	1	...	...	....
Twenty-first	1	...	...	....	...	...	1	....	1	...	...	....
Twenty-second	...	...	1	1	...	...	1	1	...	...	...	....
Twenty-third	...	1	2	1	...	...	...	1	...	...	...	....
Twenty-fourth	...	...	...	....	1	...	...	....	...	...	...	....
Total	21	18	10	11	15	5	8	7	8	4	3	9

INANITION.

Wards, Age, Color and Sex, Year **1906.**

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.				Grand Total.
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	1	...	....	3
...	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	7	3	1	....	11
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	2	...	2	7
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	4	2	2	1	9
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	...	...	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	...	1	....	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	1	1	1	6
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	2	...	....	4
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	...	...	1	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	1	...	....	1
...	...	...	1	...	...	...	....	...	...	...	....	...	...	...	....	2	...	2	2	6
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	...	...	....	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	2	...	....	3
...	...	...	....	...	1	...	....	...	...	...	....	...	...	...	....	2	7	...	1	10
...	...	...	1	...	...	...	....	...	...	...	....	...	...	...	....	...	1	3	9	13
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	2	3	2	9
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	2	...	3	8
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	...	2	1	5
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	1	1	2	5
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	4	1	...	....	5
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	...	1	....	4
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	2	2	4
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	1	2	2	5
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	...	...	....	1
3	1	...	2	...	1	...	....	...	...	...	....	...	...	...	...	47	29	21	29	126

MARASMUS.

TABLE NO. 4-A—*Showing Deaths by*

MONTHS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
January	...	...	...	....	1	1	...	....	2	1	...	....
February	...	...	1	1	2	1	...	....	1	...	1	....
March	...	1	...	....	3	...	...	....	...	2	...	....
April	...	...	...	....	...	3	...	1	2	...	...	....
May	...	2	...	....	2	2	...	....	...	...	...	....
June	1	...	...	....	1	...	...	....	1	4	...	....
July	...	...	1	....	4	1	1	....	4	3	1	1
August	1	...	...	....	3	2	...	1	4	3	...	2
September	2	...	...	1	2	3	...	1	2	1	1	4
October	3	...	...	....	3	...	...	....	5	1	2	....
November	...	...	...	....	...	...	...	....	...	2	1	...
December	...	1	...	....	2	...	...	1	1	...	1	....
Total	7	4	2	2	23	13	1	4	22	17	7	7

MARASMUS.

Months, Age, Color and Sex, Year 1913.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	2	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	1	2	1
...	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	4	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	3	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	4	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	4	....	....
...	...	2	....	...	...	1	....	...	...	...	....	...	...	...	....	8	4	6	1
1	...	...	....	1	...	...	....	...	...	...	....	...	...	...	....	10	5	....	3
...	...	...	....	...	1	...	....	...	...	...	....	...	...	...	....	6	5	1	6
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	11	1	2	....
...	...	...	1	...	...	...	....	...	...	...	....	...	...	...	....	....	2	1	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	1	1	1
1	1	2	1	1	1	1	....	...	...	...	....	...	...	...	....	54	36	13	14

MARASMUS.

TABLE NO. 4-B—*Showing Deaths by*

WARDS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	1	...	...	....	...	1	...	....	...	1	...	....
Second	1	...	...	1	1	...	...	....	1	...	...	....
Third	...	1	...	....	...	...	...	....	1	1	...	....
Fourth	1	...	1	....	...	...	1	....	...	...	2	....
Fifth	1	...	...	....	1	...	...	....	...	...	...	2
Sixth	...	...	...	....	1	...	...	....	...	1	...	....
Seventh	...	...	...	....	3	1	...	....	2	...	...	....
Eighth	...	...	...	....	2	3	...	....	...	1	...	....
Ninth	1	...	...	....	2	1	...	....	...	1	...	....
Tenth	...	...	...	1	...	...	...	....	2	...	...	....
Eleventh	1	...	...	....	1	...	...	....	...	...	...	....
Twelfth	...	...	...	....	1	...	...	....	...	...	...	1
Thirteenth	...	...	...	....	1	1	...	....	1	...	...	....
Fourteenth	...	...	...	....	1	...	...	....	1	1	...	....
Fifteenth	...	...	...	....	...	...	...	2	2	...	1	1
Sixteenth	...	...	...	....	...	...	...	....	...	...	1	2
Seventeenth	...	...	1	....	...	...	...	2	...	...	2	1
Eighteenth	1	3	...	....	7	5	...	....	3	4	...	....
Nineteenth	...	...	...	....	1	...	...	....	1	3	...	....
Twentieth	...	...	...	....	...	...	...	....	1	...	...	....
Twenty-first	...	...	...	....	...	1	...	....	...	1	1	....
Twenty-second	...	...	...	....	...	...	...	....	4	...	...	....
Twenty-third	...	...	...	....	...	...	...	....	2	...	...	....
Twenty-fourth	...	...	...	....	1	...	...	....	1	3	...	....
Total	7	4	2	2	23	13	1	4	22	17	7	7

MARASMUS.

Wards, Age, Color and Sex, Year 1913.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.				Grand Total.
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
...	...	...	1	...	...	...	....	...	...	...	....	...	...	...	....	1	2	...	1	4
...	...	...	....	...	1	...	....	...	...	...	....	...	...	...	....	3	1	...	1	5
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	2	...	....	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	...	4	....	5
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	...	...	2	4
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	1	...	....	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	5	1	...	....	6
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	4	...	....	6
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	2	...	....	5
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	...	...	1	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	...	...	....	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	...	...	1	2
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	1	...	....	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	1	...	....	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	...	1	3	6
...	...	1	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	2	2	4
...	...	1	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	4	3	7
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	11	12	...	....	23
...	...	...	....	...	...	1	....	...	...	...	....	...	...	...	....	2	3	1	....	6
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	...	...	....	1
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	2	1	....	3
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	4	...	...	....	4
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	...	...	....	2
1	1	...	....	1	...	...	....	...	...	...	....	...	...	...	....	4	4	...	....	8
1	1	2	1	1	1	1	....	...	...	...	....	...	...	...	....	54	36	13	14	117

MARASMUS.

TABLE NO. 1-A—*Showing Deaths by*

MONTHS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
January	...	...	1	2	1	1	1	2	2	1	...	2
February	1	...	...	1	...	1	...	....	1	...	1	1
March	...	...	1	....	...	1	...	1	...	...	...	....
April	2	...	...	....	...	...	3	2	2	1	...	....
May	2	...	...	1	2	1	2	2	4	4	2	4
June	...	...	...	....	1	1	...	3	4	6	1	2
July	...	...	...	....	6	1	...	5	4	7	5	5
August	...	2	...	....	1	4	3	2	7	5	3	1
September	...	...	1	....	...	4	1	3	9	3	1	....
October	2	1	...	1	1	1	2	3	3	5	...	1
November	...	...	...	1	2	3	2	3	2	1	1	1
December	...	...	...	1	1	1	...	4	4	...	1	....
Total	7	3	3	7	15	19	14	30	42	33	15	17

MARASMUS.

Months, Age, Color and Sex, Year 1905.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	2	2	6
...	...	1	....	...	...	...	....	...	...	...	...	...	...	...	....	2	1	2	2
...	...	1	....	...	...	...	....	...	...	...	....	...	...	...	....	....	1	2	1
...	...	...	....	...	...	...	....	...	...	...	1	...	...	...	....	4	1	3	3
...	1	1	....	...	...	...	....	...	...	...	....	...	...	...	....	8	6	5	7
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	5	7	1	5
1	...	1	1	1	...	...	1	...	...	...	....	...	...	...	....	12	8	6	12
1	1	1	1	...	...	...	....	...	...	...	....	...	...	...	....	9	12	7	4
2	1	2	....	...	...	...	....	...	...	...	....	...	...	...	....	11	8	5	3
1	1	1	1	...	...	...	....	...	...	...	....	...	...	...	....	7	8	3	6
...	1	1	....	...	...	...	....	...	...	...	....	...	...	...	....	4	5	4	5
1	...	...	1	...	...	...	....	...	...	...	....	...	...	...	....	6	1	1	6
6	5	9	4	1	...	...	1	...	...	...	1	...	...	...	....	71	60	41	60

MARASMUS.

TABLE NO. 2-B—*Showing Deaths by*

WARDS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	...	...	...	....	1	...	...	....	2	1	...	1
Second	...	1	...	1	2	1	...	....	2	1	...	....
Third	...	...	...	....	1	2	...	....	3	2	...	1
Fourth	...	...	2	4	1	1	11	18	1	...	2	6
Fifth	...	...	...	....	...	...	1	1	1	...	...	....
Sixth	2	...	...	....	...	...	...	....	1	1	1	1
Seventh	...	...	...	....	...	...	...	....	1	2	1	....
Eighth	...	...	...	....	...	1	...	1	2	1	...	....
Ninth	...	...	...	....	...	...	...	....	...	...	...	....
Tenth	1	...	...	....	...	1	...	....	3	...	1	....
Eleventh	...	...	1	....	...	...	...	1	...	...	1	....
Twelfth	...	...	...	....	...	1	1	....	...	2	4	2
Thirteenth	...	...	...	....	1	1	...	....	1	1	...	....
Fourteenth	2	...	...	....	1	3	1	1	6	5	1	....
Fifteenth	...	...	...	....	1	...	...	....	1	1	...	....
Sixteenth	...	...	...	....	...	1	...	3	...	...	1	2
Seventeenth	...	...	...	2	1	...	...	1	1	...	...	2
Eighteenth	...	1	...	....	2	3	...	1	9	6	1	....
Nineteenth	...	...	...	....	...	...	...	....	1	3	...	....
Twentieth	1	...	...	....	2	1	...	....	...	1	...	....
Twenty first	1	...	...	....	1	1	...	1	2	3	...	1
Twenty second	...	1	...	....	...	...	...	2	...	...	1	1
Twenty third	...	...	...	....	...	2	...	....	1	3	1	....
Twenty fourth	...	...	...	....	1	...	...	....	4	...	...	....
Total	7	3	3	7	15	19	14	30	42	33	15	17

MARASMUS.

Wards, Age, Color and Sex, Year 1905.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.				Grand Total.
White.		Colored		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1	...	...	....	1	...	...	....	...	...	...	....	...	...	...	....	5	1	...	1	7
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	4	3	...	1	8
...	...	...	....	...	...	...	....	...	...	...	1	...	...	...	....	4	4	...	2	10
...	...	1	....	...	...	...	....	...	...	...	....	...	...	...	....	2	1	16	28	47
...	...	1	1	...	...	...	....	...	...	...	....	...	...	...	....	1	...	2	2	5
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	4	1	1	1	7
2	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	2	1	....	6
...	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	3	...	1	6
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	....
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	4	1	1	....	6
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	...	...	2	1	3
...	...	1	1	...	...	...	....	...	...	...	....	...	...	...	....	...	3	6	3	12
...	...	...	1	...	...	...	....	...	...	...	....	...	...	...	....	2	2	...	1	5
...	...	1	....	...	...	...	....	...	...	...	....	...	...	...	....	9	8	3	1	21
...	...	1	....	...	...	...	....	...	...	...	....	...	...	...	....	2	1	1	....	4
...	...	1	....	...	...	...	....	...	...	...	....	...	...	...	....	...	1	2	5	8
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	2	...	...	5	7
...	...	2	....	...	...	...	....	...	...	...	....	...	...	...	....	11	10	3	1	25
...	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	4	...	....	5
...	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	3	3	...	....	6
...	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	4	5	...	2	11
...	...	1	1	...	...	...	1	...	...	...	....	...	...	...	....	...	1	2	5	8
...	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	1	5	1	....	7
2	1	...	....	...	...	...	....	...	...	...	....	...	...	...	....	7	1	...	....	8
6	5	9	4	1	...	...	1	...	...	...	1	...	...	...	....	71	60	41	60	232

MARASMUS.

TABLE NO. 1-A—*Showing Deaths by*

MONTHS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
January	1	...	1	1	...	3	2	1	3	1	1	....
February	1	1	...	1	2	1	...	2	1	3	3	1
March	...	1	...	....	3	...	3	1	1	4	1	2
April	...	...	1	....	1	1	...	2	1	...	1	2
May	4	3	1	....	2	2	1	1	2	2	3	....
June	5	3	...	....	9	2	4	....	1	1	3	1
July	8	7	2	1	7	6	4	4	9	8	4	3
August	6	5	3	....	8	6	1	....	5	7	4	3
September	2	5	...	2	6	8	1	....	8	10	4	3
October	10	2	...	2	11	7	2	1	10	3	2	3
November	2	1	...	1	...	1	1	1	1	1	1	1
December	5	...	...	1	8	4	3	2	3	...	3	3
Total	44	28	8	9	57	41	22	15	45	40	30	22

MARASMUS.

Months, Age, Color and Sex, Year 1906.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
...	...	1	1	...	...	...	....	...	...	...	....	...	...	...	....	4	4	5	3
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	5	5	3	4
2	...	3	1	...	...	...	....	...	...	...	....	...	...	...	....	6	5	7	4
1	...	...	1	...	...	...	....	...	...	...	....	...	...	...	....	3	1	2	5
1	...	...	1	...	...	...	....	...	...	...	....	...	...	...	....	9	7	5	2
...	...	...	1	...	...	...	....	...	...	...	....	...	...	...	....	15	6	7	2
1	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	25	21	10	8
3	1	1	....	...	...	...	....	...	...	...	....	...	...	...	....	22	19	9	3
4	3	...	1	...	...	...	....	...	...	...	....	...	...	...	....	20	26	5	6
2	...	...	....	...	...	...	....	...	...	...	....	...	...	...	....	33	12	4	6
...	1	...	1	...	...	...	....	...	...	...	....	...	...	...	....	3	4	2	4
...	...	1	....	...	...	...	....	...	...	...	....	...	...	...	....	16	4	7	6
15	5	6	7	...	...	...	....	...	...	...	....	...	...	...	....	161	114	66	53

MARASMUS.

TABLE NO. 2-B—*Showing Deaths by*

WARDS.	Under 1 Month.				Between 1 and 3 Months.				Between 3 and 12 Months.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	...	...	...	....	...	...	...	....	1	1	...	....
Second	1	...	...	....	3	...	...	....	6	4	...	....
Third	2	1	...	....	2	1	...	....	3	3	...	....
Fourth	1	...	7	8	2	...	15	10	1	...	16	10
Fifth	1	...	1	....	1	2	2	1	...	1	1	2
Sixth	...	1	...	....	1	...	...	....	1	1	2	1
Seventh	1	...	...	....	1	3	1	1	1	2	1	....
Eighth	...	...	...	....	1	2	...	....	4	5	1	...
Ninth	...	...	...	....	1	...	...	....	2	...	...	1
Tenth	...	...	...	1	...	2	...	....	...	3	...	....
Eleventh	1	1	...	....	...	...	1	....	...	...	1	1
Twelfth	...	...	...	....	1	...	...	....	1	...	1	2
Thirteenth	...	...	...	....	...	1	...	....	3	2	...	...
Fourteenth	36	23	...	....	35	20	3	....	6	4	2	...
Fifteenth	...	...	...	....	...	...	...	1	1	1	1	1
Sixteenth	...	...	...	....	1	...	...	....	...	...	...	1
Seventeenth	...	...	...	....	...	...	...	....	...	...	...	...
Eighteenth	1	...	...	....	2	1	...	....	1	6	...	...
Nineteenth	...	...	...	....	1	2	...	....	...	...	1	...
Twentieth	...	1	...	....	...	3	...	....	...	1	1	...
Twenty-first	...	...	...	....	2	1	...	....	2	1	1	1
Twenty-second	...	...	...	....	1	1	...	2	2	...	1	2
Twenty-third	...	...	...	....	...	...	...	....	3	1	...	...
Twenty-fourth	...	1	...	....	2	2	...	....	7	4	...	...
Total	44	28	8	9	57	41	22	15	45	40	30	22

MARASMUS.

Wards, Age, Color and Sex, Year 1906.

Between 1 and 2 Years.				Between 2 and 3 Years.				Between 3 and 4 Years.				Between 4 and 5 Years.				Total.				Grand Total.
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	2	...	...	6
...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	6	...	...	16
2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	9	5	1	...	15
2	1	...	3	...	...	...	...	...	...	...	...	...	...	...	...	6	1	38	31	76
...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	3	5	3	13
...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	3	1	8
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	5	2	1	12
...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	5	7	2	...	14
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1	...	1	5
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...	1	6
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	1	5
1	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	3	2	8
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3	...	...	6
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	77	47	5	...	129
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	3	6
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	2
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	7	...	...	15
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	2	1	1	5
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	1	...	6
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	2	1	1	8
1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	4	1	1	5	11
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1	...	...	4
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	7	...	...	17
15	5	6	7	...	...	...	...	...	...	...	...	...	...	...	...	161	114	66	53	394

CANCER.

TABLE NO. 1—*Total Deaths and Death Rates for White and Colored Population, Based on Census of* 1910, *from* 1903 *to* 1913, *Inclusive.*

YEAR.	*Estimated Population.	Total Deaths.	Death Rate per 1,000 of Population.	White. No. of Deaths.	White. Death Rate per 1,000.	Colored. No. of Deaths.	Colored. Death Rate per 1,000.
1903	524,407	311	0.593	285	0.621	26	0.319
1904	529,423	375	0.708	331	0.739	44	0.537
1905	534,439	376	0.704	323	0.715	57	0.690
1906	539,455	392	0.727	341	0.725	51	0.614
1907	544.471	400	0.735	347	0.753	53	0.646
1908	549,497	414	0.753	355	0.763	59	0.701
1909	554,513	403	0.727	351	0.747	52	0.614
1910	559,529	472	0.844	420	0.885	52	0.610
1911	564.547	465	0.824	410	0.856	55	0.641
1912	569,561	484	0.849	425	0.879	59	0.683
1913	574.577	602	1.047	514	1.053	88	1.013

*Corrected to July 1 of each year, according to census of 1910.

CANCER.

TABLE No. 2—*Average Age at Death in Year* 1913—*Average at Death both White and Colored.*

	White.			Colored.			Total.		Grand. Total.
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	
Number of deaths.........	199	315	514	33	55	88	232	370	602
Combined number of years.	11,382.76	18,019.48	29,402.24	1,670.84	2,631.98	4,302.82	13,053.60	20,651.46	33,705.06
Average age in years......	57.199	57.204	57.202	50.631	47.854	48.895	56.265	55.814	55.988

CANCER.

Table No. 3—*Deaths Due to Cancer of the Seven Organs Most Frequently Involved Primarily, Giving the Average Age at Death, Year* 1913.

Organ Involved.	Number of Deaths.					Average Age at Death.				Average age of white and colored combined.
	White.		Colored.		Total.	White.		Colored.		
	Male.	Female.	Male.	Female.		Male.	Female.	Male.	Female	
Liver	21	47	3	1	72	59.090	62.635	52.666	57.000	61.107
Stomach	71	47	14	9	141	61.153	59.985	50.720	51.445	59.108
Uterus	....	69	....	23	92	....	56.082	....	45.756	53.501
Breast	....	39	....	10	49	....	52.596	....	52.125	52.500
Esophagus	10	6	....	1	17	55.276	60.096	....	40.000	56.078
Rectum	11	9	....	....	20	58.583	62.573	....	....	60.379
Intestines	9	18	1	2	39	54.748	57.961	60.000	38.500	55.768

CANCER.

Table No. 4—*Deaths Due to Cancer, Arranged*

Ages.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos.	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos.	....	....	....	....	1	....	....	....
Bet. 1 and 2 yrs.	....	....	....	....	....	....	....	....
Bet. 2 and 3 yrs.	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs.	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs.	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs.	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs.	....	1	....	....	....	....	....	....
Bet. 15 and 19 yrs.	....	....	....	....	1	....	....	....
Bet. 20 and 24 yrs.	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs.	....	1	....	....	....	....	....	....
Bet. 30 and 34 yrs.	1	1	....	1	....	1	....	....
Bet. 35 and 39 yrs.	2	1	....	....	....	....	1	....
Bet. 40 and 44 yrs.	....	1	....	1	....	1	....	....
Bet. 45 and 49 yrs.	1	6	....	....	3	3	....	1
Bet. 50 and 54 yrs.	4	7	....	1	1	1	....	....
Bet. 55 and 59 yrs.	1	5	1	1	3	5	2	....
Bet. 60 and 64 yrs.	1	4	1	....	2	2	1	....
Bet. 65 and 69 yrs.	3	1	....	....	1	4	....	....
Bet. 70 and 74 yrs.	....	2	....	....	....	4	....	....
Bet. 75 and 79 yrs.	....	2	....	....	....	2	....	....
Bet. 80 and 84 yrs.	....	....	....	....	....	1	....	....
Bet. 85 and 89 yrs.	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs.	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs.	....	....	....	....	....	....	....	....
Total	13	32	2	4	12	24	4	1

CANCER.

by Age, Sex, Color and Months, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	1	....	....	1	1	....	....
....	....	....	....	1	....	....	1	1	....	....	....	....	....	....	1
....	3	....	1	1	1	....	....	....	....	1	....	2	....	1	....
....	2	....	....	....	3	....	2	1	6	....	3	2	2	1	....
1	1	....	2	1	4	1	....	3	2	1	1	1	3	....	1
3	3	....	....	3	3	....	....	2	....	1	1	1	2	1	1
5	1	....	....	3	2	1	2	3	1	....	....	4	5	....	2
....	1	....	....	2	5	....	....	4	5	....	....	4	3	....	1
2	7	1	....	1	1	....	....	3	3	....	1	1	1	1	....
1	1	....	1	2	2	....	1	....	6	....	....	1	3	....	....
1	....	....	....	1	2	....	....	....	1	....	....	....	2	....	....
1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
14	20	1	4	17	25	2	6	17	25	3	6	18	22	4	6

Continued on next page.

CANCER.

Table No. 4 (Continued)—*Deaths Due to Cancer,*

Ages.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 2 and 3 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs.	....	....	....	....	....	....	1	....	....	....	....	....
Bet. 30 and 34 yrs.	....	2	....	....	2	2	....	....	1	1	....	....
Bet. 35 and 39 yrs.	....	1	....	2	....	1	....	2	....	3	....	....
Bet. 40 and 44 yrs.	....	1	1	....	....	1	1	....	....	....	1	3
Bet. 45 and 49 yrs.	1	3	....	1	....	1	1	2	....	3	....	2
Bet. 50 and 54 yrs.	1	6	....	....	2	4	....	1	4	6	1	....
Bet. 55 and 59 yrs.	3	4	....	....	3	4	1	....	4	5	....	....
Bet. 60 and 64 yrs.	1	5	....	1	1	2	....	1	1	3	1	....
Bet. 65 and 69 yrs.	3	6	....	....	2	2	....	....	2	1	....	....
Bet. 70 and 74 yrs.	5	2	....	....	4	3	....	....	....	....	....	....
Bet. 75 and 79 yrs.	1	3	....	....	1	1	....	....	....	....	....	....
Bet. 80 and 84 yrs.	1	2	....	....	....	1	....	....	3	....	....	....
Bet. 85 and 89 yrs.	....	1	....	....	....	....	....	....	1	....	....	....
Bet. 90 and 94 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Total	16	36	1	4	15	22	4	6	16	22	3	5

CANCER.

Arranged by Age, Sex, Color and Months, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....
1	....	....	....	....	....	....	....	....	1	....	....	2	2	....	....
1	....	....	....	1	....	....	1	....	1	....	....	3	5	1	1
....	....	....	1	....	....	....	....	....	....	....	1	6	7	....	5
....	....	....	....	2	2	....	....	....	1	....	....	7	13	3	5
2	1	....	1	....	3	2	....	2	2	1	2	7	23	7	12
4	3	....	1	1	4	....	....	1	5	....	....	17	38	3	11
5	7	2	....	....	1	....	1	4	6	1	1	30	46	6	6
3	2	....	....	4	5	1	1	6	7	1	1	42	46	7	7
2	4	....	1	2	6	....	....	2	3	....	....	22	43	3	4
2	1	....	....	4	1	....	....	3	2	....	....	27	30	2	1
1	4	....	....	....	2	....	....	3	4	1	....	17	33	1	2
....	1	....	....	2	1	....	....	3	1	....	....	9	16	....	....
....	2	....	....	....	....	....	....	....	2	....	....	6	8	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	2	....	....
....	....	....	1	....	....	....	....	....	2	....	....	....	2	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
21	25	2	5	16	25	3	3	24	37	4	5	100	315	33	55

CANCER.

TABLE NO. 5—*Deaths Due to Cancer, Arranged*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	1	2	....	....
Second	....	....	....	....	....	....	....	....
Third	....	2	....	....	....	....	....	....
Fourth	....	1	....	1	1	1	1	....
Fifth	....	....	....	....	....	2	1	....
Sixth	....	1	....	....	1	1	....	....
Seventh	3	2	....	....	....	1	....	....
Eighth	1	2	....	....	2	1	....	....
Ninth	1	2	1	....	....	....	....	....
Tenth	....	1	....	....	2	....	....	....
Eleventh	1	1	1	....	....	1	....	1
Twelfth	....	1	....	....	....	1	....	....
Thirteenth	1	4	....	....	....	1	....	....
Fourteenth	1	2	....	....	....	3	1	....
Fifteenth	....	1	....	....	1	2	....	....
Sixteenth	....	2	....	....	....	1	1	....
Seventeenth	1	2	....	....	1	....	....	....
Eighteenth	....	....	....	2	....	1	....	....
Nineteenth	....	3	....	....	1	2	....	....
Twentieth	....	1	....	....	....	2	....	....
Twenty-first	1	1	....	....	....	1	....	...
Twenty-second	....	....	....	....	....	....	....	....
Twenty-third	1	1	....	1	1	....	....	....
Twenty-fourth	1	2	....	....	....	1	....	....
Bay View	1	....	....	....	1	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	13	32	2	4	12	24	4	1

CANCER.

by Wards, Months, Color, and Sex, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1	1	....	....	....	2	....	....	1	1	....	....	1	1	....	....
1	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
....	1	....	....	1	....	....	....	1	1	....	....	1	....	....	....
1	1	....	1	1	....	....	1	2	....	....	....	3	1	....	....
....	....	....	1	1	....	....	....	1	....	....	....	....	....	....	....
3	....	....	....	2	1	....	....	1	4	....	....	4	1	....	....
....	1	....	1	3	4	....	1	....	1	....	....	2	2	....	....
....	....	....	....	1	1	....	....	1	2	....	1	....	1	....	....
....	2	....	....	1	....	....	....	1	....	....	....	....	....	....	1
....	....	....	....	1	1	....	1	1	1	....	....	....	1	....	....
....	1	....	....	1	2	1	....	....	....	....	1	....	1	....	1
....	2	....	....	1	1	....	....	1	3	....	....	....	2	1	....
2	2	....	....	....	2	....	....	2	1	....	....	2	3	....	....
....	1	....	....	1	1	....	....	1	1	....	1	1	....	....	....
....	3	....	....	....	1	....	....	....	2	....	1	2	1	1	1
1	2	....	....	....	1	....	1	1	4	1	....	1	2	....	1
1	....	1	1	....	....	....	1	....	....	1	....	....	....	1	....
....	1	....	....	....	2	....	....	....	1	....	1	....	1	....	....
1	....	....	....	....	2	....	....	....	....	....	....	....	1	1	....
1	2	....	....	1	2	....	....	1	....	....	....	....	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
....	....	....	....	1	....	....	....	1	3	....	....	....	....	....	....
2	....	....	....	....	2	....	....	....	....	....	....	....	1	....	....
....	....	....	....	1	....	....	1	....	....	1	1	....	....	....	2
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
14	20	1	4	17	25	2	6	17	25	3	6	18	22	4	6

Continued on next page.

CANCER.

Table No. 5 (Continued)—*Deaths Due to Cancer,*

Wards.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First		4				1			1	1		
Second	2					4				2		1
Third									1			
Fourth	1		1		1	1		1	1	1	1	
Fifth		1							1	1		
Sixth		3			2					1		
Seventh	2	3							2			
Eighth		2			1				1			1
Ninth	1	1			2					2		
Tenth		4			1		1		1			
Eleventh		1			1	1		1		2		
Twelfth		2			1	1	1		1	2		
Thirteenth		1				1				2		
Fourteenth	1	1			1	3				1		
Fifteenth	3			1		1			2	1	1	
Sixteenth	2	2				2		1	1	1		1
Seventeenth				1				1		2	1	2
Eighteenth		2		1	1	3	1	2		2		
Nineteenth		1			2	1			1			
Twentieth		6										
Twenty-first	1											
Twenty-second	1				1							
Twenty-third	1	1		1		1				1		
Twenty-fourth	1	1			1							
Bay View						2	1		3			
Sydenham												
Total	16	36	1	4	15	22	4	6	16	22	3	5

CANCER.

Arranged by Wards, Months, Color, and Sex, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1	....	....	....	....	....	....	....	1	2	....	....	7	15	....	....
....	....	....	....	....	1	....	....	2	1	....	....	6	8	....	1
....	1	....	....	....	1	....	....	2	....	....	....	6	6	....	....
3	....	....	1	2	1	....	....	1	....	1	....	17	7	4	5
....	1	....	1	2	....	....	1	....	....	1	....	5	5	2	3
2	2	....	....	....	2	1	....	....	3	....	....	15	19	1	....
2	....	....	1	2	1	....	....	2	3	....	1	18	18	....	4
....	1	....	....	....	5	....	....	....	3	....	....	7	18	....	2
....	1	1	1	1	1	....	....	4	1	....	....	11	10	2	2
....	1	....	....	1	....	....	1	2	2	....	....	9	11	1	2
....	1	....	....	....	1	....	....	1	2	....	1	4	14	2	5
....	....	....	....	2	1	1	....	....	3	....	1	6	19	3	1
1	1	....	....	....	1	....	....	2	2	....	....	10	21	....	....
1	2	1	....	2	1	....	....	....	2	1	1	9	18	3	2
2	1	....	....	1	2	....	....	1	3	....	....	12	18	2	3
2	4	....	....	....	....	....	....	....	3	....	....	8	24	2	4
....	....	....	....	1	1	....	....	1	1	....	1	5	6	4	7
....	1	....	....	....	....	1	....	....	1	....	....	1	15	2	6
....	1	....	....	2	2	....	....	1	2	....	....	8	15	1	....
3	2	....	....	....	2	....	....	1	3	....	....	7	22	....	....
....	1	....	....	....	1	....	....	1	....	....	....	4	5	....	....
1	2	....	1	....	....	....	1	....	....	....	....	3	2	1	2
....	1	....	....	....	....	....	....	1	....	....	....	6	8	....	2
2	....	....	....	....	1	....	....	1	....	....	....	8	8	....	....
1	1	....	....	....	....	....	....	....	....	1	....	7	3	3	4
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
21	25	2	5	16	25	3	3	24	37	4	5	199	315	33	55

CANCER.

TABLE NO. 6—*Deaths Due to Cancer, Arranged by Occupation and Social Condition, Year* 1913.

Agents (commission)	1
Agents (insurance)	1
Agents (real estate)	2
Bakers	1
Barbers	3
Bartenders	1
Boilermakers	1
Butchers	1
Bankers	3
Builders and contractors	2
Bricklayers	2
Boxmakers	2
Bookkeepers, clerks	12
Carpenters	2
Cabinetmakers	1
Canmakers	1
Cooks	8
Coopers	3
Cloth pressers	1
Drivers	2
Dressmakers and seamstresses	3
Dairymen	1
Druggists	1
Dentists	1
Domestics	34
Electrical workers	1
Engineers (mechanical)	1
Engineers (stationary engine)	3
Furniture manufacturers	1
Foremen	1
Factory hands	3
Farmers	10
Farm laborers	2
Harnessmakers	1
Hairdressers	1
Hotel proprietors	1
Housewives	197
Inspectors	1
Ironworkers	1
Jobbers	1
Jewelers (dealers)	1
Laborers	41
Launderers or laundresses	8
Lawyers	2
Livery stable keepers	1
Locksmiths	1
Machinists	4
Manufacturers	4
Moulders	1
Merchants	8
Managers	2
Millers	1
Milliners	1
Miner (coal)	1
Mariners	1
Ministers	1
Music teachers	1
Nurses	2
Newspaper carriers	1
Oystermen	1
Operators	2
Painters	7
Plasterers	2
Packers	2
Physicians	2
Plumbers	3
Policemen and watchmen	4
Postoffice employees	1
Porters	1
Printers and engravers	2
Restaurantkeepers	2
Salesmen	3
Saleswomen	1
Seamen	2
Steam railway employees	2
Stonemasons	1
Shoemakers	5
Sextons	2
Ship carpenters	1
Storekeepers	2
Stevedores	1
School children	2
Tailors or tailoresses	7
Teamsters	2
Teachers	6
Telegraph operators	1
Waiters	4
Wheelwrights	1
Whitewashers	1
Woodworkers	2
No occupation	130

CANCER.

ABLE No. 6 (Continued)—*Deaths Due to Cancer, Arranged by Occupation and Social Condition, Year* 1913.

Social Condition.

Unknown	4	Widows	144
Divorced	8	Widowers	43
Single	75		
Married	328	Total	602

HEART DISEASES.

TABLE No. 1—*Showing Deaths by Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored	
	M.	F.	M.	F.	M.	F.	M.	F.
First	2	1	....	....	2	1	....	....
Second	1	....	....	....	1	3	....	....
Third	1	1	....	....	1	....	....	....
Fourth	1	....	1	2	2	....	....	1
Fifth	2	1	3	1	1	1	1	....
Sixth	1	....	....	1	....	2	....	1
Seventh	1	2	....	....	2	....	....	....
Eighth	3	2	....	....	2	2	....	2
Ninth	....	1	....	....	....	2	....	....
Tenth	2	3	1	....	5	2	....	1
Eleventh	....	2	1	1	1	....	2	....
Twelfth	....	2	2	....	2	1	....	1
Thirteenth	2	3	....	....	2	1	....	....
Fourteenth	1	....	3	1	2	1	2	1
Fifteenth	3	....	....	1	5	1	....	1
Sixteenth	....	3	....	....	....	....	....	1
Seventeenth	....	....	1	1	1	....	1	5
Eighteenth	1	....	....	....	1	1	....	3
Nineteenth	....	1	....	....	2	2	....	....
Twentieth	2	1	....	....	4	3	....	....
Twenty-first	1	1	....	....	1	2	....	1
Twenty-second	....	2	1	....	2	....	....	....
Twenty-third	....	1	....	....	1	3	1	1
Twenty-fourth	3	2	....	....	2	1	....	....
Bay View	....	....	1	....	1	....	1	1
Sydenham	....	....	....	....	....	....	....	....
Total	27	29	14	8	43	29	8	20

HEART DISEASES.

Months, Color and Sex, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	2	....	....	3	1	....	....	1	....	....	....	....	....	....	....
1	1	....	....	....	....	....	....	2	2	....	....	1	1	....	....
1	....	....	....	1	2	....	....	1	....	....	....	1	2	....	....
2	1	1	2	4	1	....	1	2	1	....	....	1	1	1	....
....	1	....	....	1	1	....	2	2	....	1	1	....	....	1	1
1	4	1	....	1	....	1	....	....	2	....	1	1	....	1	....
2	2	1	....	2	....	....	....	1	2	....	....	1	....	1	....
3	3	....	....	2	2	....	2	2	1	....	....	....	2	....	....
2	2	....	....	1	2	....	....	....	....	....	....	....	....	....	....
1	2	1	1	1	2	1	....	3	1	....	....	1	1	1	....
....	1	....	....	1	1	....	....	2	....	1	1	....	2	1	2
2	4	....	1	1	1	....	1	1	....	1	....	1	2	1	....
....	2	....	....	....	1	....	....	1	3	....	....	2	....	....	....
1	4	1	2	2	....	....	1	....	2	....	1	....	....	....	....
3	2	1	....	....	1	....	....	4	5	2	2	1	....	....	....
....	1	2	2	....	....	....	....	1	1	3	1	1	....	....	1
....	1	1	1	....	4	1	3	1	....	2	2	....	1	....	....
1	....	....	1	1	1	1	1	2	1	2	1	2	2	....	1
2	1	....	....	3	1	....	....	....	4	....	1	1	1	1	....
....	5	....	....	2	1	....	....	3	3	....	....	....	3	....	....
2	1	1	....	1	1	....	....	....	1	1	....	1	4	2	....
3	1	....	3	....	....	....	....	1	....	....	....	....	1	1	....
1	2	....	....	2	2	....	....	1	1	1	....	....	2	....	....
1	1	....	....	3	1	....	....	2	....	....	....	1	....	....	....
1	....	....	....	....	....	1	....	....	....	1	2	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
30	44	10	13	32	26	5	11	33	30	15	13	16	25	11	5

Continued on next page.

HEART DISEASES.

TABLE NO. 1 (Continued)—*Showing Deaths by*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	5	....	....	....	1	3	....	....	2	....	....	....
Second	1	2	....	1	1	1	1	2	....	....	....	....
Third	2	....	....	....	1	....	1	....	1	2	....	....
Fourth	....	....	2	....	....	1	....	....	2	1	1	....
Fifth	1	1	....	3	....	....	4	3	....	....	1	1
Sixth	1	3	....	1	....	....	....	....	1	....	....	....
Seventh	....	....	....	....	2	2	....	1	....	1	1	....
Eighth	2	....	1	....	4	2	....	....	1	2	....	....
Ninth	1	....	....	....	3	3	1	....	....	1	....	....
Tenth	3	....	1	....	1	....	1	....	1	....	....	....
Eleventh	....	....	....	2	....	....	....	....	1	....	....	1
Twelfth	2	....	1	1	2	1	1	....	....	2	....	....
Thirteenth	5	1	....	....	3	2	....	1	1	2	....	....
Fourteenth	1	1	2	2	1	1	1	1	1	....	....	....
Fifteenth	3	1	....	4	1	1	1	1	2	3	2	....
Sixteenth	....	1	1	....	1	2	1	....	....	1	....	1
Seventeenth	....	1	1	....	1	1	2	1	....	....	....	1
Eighteenth	....	....	....	1	....	2	....	2	2	1	1	1
Nineteenth	2	4	....	2	1	1	....	....	....	1	....	....
Twentieth	1	1	....	....	1	1	....	....	1	1	....	....
Twenty-first	1	1	....	....	1	....	....	....	....	....	....	....
Twenty-second	....	....	....	1	1	1	1	....	....	1	....	....
Twenty-third	....	....	1	....	1	2	....	....	....	1	....	....
Twenty-fourth	1	1	....	....	....	....	....	....	1	1	....	....
Bay View	....	....	....	....	....	....	....	1	2	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	32	18	10	18	27	27	15	13	19	21	6	5

HEART DISEASES.

Wards, Months, Color and Sex, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
2	....	....	....	1	....	....	....	1	2	....	....	20	10	....	....
2	2	....	....	1	2	....	....	....	2	....	....	11	16	1	3
1	1	1	....	1	1	1	1	1	....	....	....	13	9	3	1
1	....	1	2	1	....	1	....	3	1	2	....	19	7	10	8
....	....	1	2	....	1	1	1	1	1	4	1	8	7	17	16
....	2	....	....	1	1	....	....	2	4	3	1	9	18	6	5
1	....	....	2	2	....	....	....	....	1	1	1	14	10	4	4
1	....	....	....	....	3	....	....	2	4	....	....	22	23	1	4
....	1	....	....	2	....	....	....	1	3	1	....	10	15	2	....
....	2	....	....	....	2	....	....	1	1	....	....	19	16	6	2
3	....	....	1	5	4	....	2	3	....	....	5	16	10	5	15
1	2	....	1	2	1	....	1	2	3	....	....	16	19	6	6
1	5	....	....	2	....	1	....	....	1	....	....	19	21	1	1
....	1	2	....	1	....	....	1	3	2	2	1	13	12	13	11
2	2	2	....	1	3	....	....	1	....	....	1	26	19	8	10
....	4	1	....	4	2	....	....	1	2	2	....	8	17	10	6
....	....	6	3	....	2	....	....	....	....	1	1	3	10	16	18
1	....	....	....	4	1	1	1	....	....	2	1	15	9	7	13
1	1	....	....	....	....	....	....	1	3	....	1	13	20	1	4
1	1	....	....	3	2	....	....	1	2	....	....	19	24	....	....
1	1	....	....	....	....	2	....	1	....	....	....	10	12	6	1
2	1	....	1	1	....	....	....	2	1	1	1	12	8	4	6
1	1	1	1	....	....	....	....	....	1	....	....	7	16	4	2
1	1	....	....	1	....	....	....	5	....	....	....	21	8	....	....
....	....	....	....	....	1	....	....	2	....	....	....	6	1	4	4
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
23	28	15	13	33	26	7	7	34	34	19	14	349	337	135	140

HEART DISEASES.

TABLE NO. 2—*Showing Deaths by Age,*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	1	....	....
Bet. 3 and 12 mos	....	....	....	....	....	....	1	....
Bet. 1 and 2 yrs	....	....	....	....	....	....	....	....
Bet. 2 and 3 yrs	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs	1	....	....	....	....	....	....	....
Bet. 10 and 14 yrs	....	....	....	....	....	2	....	....
Bet. 15 and 19 yrs	1	1	....	....	....	2	....	....
Bet. 20 and 24 yrs	....	2	....	....	....	1	....	....
Bet. 25 and 29 yrs	2	....	....	....	....	1	....	....
Bet. 30 and 34 yrs	1	....	1	....	3	1	....	1
Bet. 35 and 39 yrs	....	1	3	1	1	....	....	....
Bet. 40 and 44 yrs	3	2	2	....	1	2	1	1
Bet. 45 and 49 yrs	3	3	1	....	2	3	....	3
Bet. 50 and 54 yrs	1	1	....	2	5	2	2	4
Bet. 55 and 59 yrs	5	2	1	....	7	....	2	1
Bet. 60 and 64 yrs	3	3	2	1	6	4	....	4
Bet. 65 and 69 yrs	3	5	2	....	10	1	1	2
Bet. 70 and 74 yrs	2	3	....	....	3	3	....	2
Bet. 75 and 79 yrs	....	2	2	3	3	2	1	2
Bet. 80 and 84 yrs	1	2	....	....	1	3	....	....
Bet. 85 and 89 yrs	1	2	....	1	1	1	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	27	29	14	8	43	29	8	20

HEART DISEASES.

Months, Color and Sex, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1	1	....	....	....	....	....	....	1	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	1	1	....	....	....	....	....	....
1	....	....	....	....	1	....	....	....	1	1	....	2	1	....	....
....	2	....	....	1	....	....	....	1	1	1	....	....	....	....	....
2	1	1	....	2	....	....	....	1	....	1	....	....	....	....	1
1	2	1	....	1	....	....	....	3	1	....	1	1	....	1	....
....	1	1	1	2	2	1	....	....	....	2	....	....	1	2	....
1	2	2	....	3	....	1	....	1	2	1	3	....	2	1	....
2	1	2	1	....	1	1	1	2	1	2	....	2	1	2	....
3	3	1	1	....	1	....	4	5	3	1	1	3	2	....	1
4	1	1	2	3	....	1	1	3	....	3	2	....	2	1	2
....	....	....	1	4	1	....	1	....	1	....	2	2	2	....	....
3	4	....	1	1	3	....	1	3	4	2	....	....	3	2	....
3	5	....	....	4	3	....	1	2	4	....	1	....	1	1	....
2	8	1	4	5	1	1	....	4	4	....	1	4	6	....	....
3	6	....	1	3	7	....	1	....	4	1	1	1	2	....	....
2	2	....	....	2	6	....	1	4	1	....	....	1	1	....	1
1	5	....	....	1	....	....	....	2	2	....	....	....	....	....	....
....	....	....	1	....	....	....	....	....	....	....	1	....	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
30	44	10	13	32	26	5	11	33	30	15	13	10	25	11	5

Continued on next page.

HEART DISEASES.

TABLE No. 2 (Continued)—*Showing Deaths by*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F
Under 1 month	....	....	....	....	....	1	....	....	1	....	....	....
Bet. 1 and 3 mos.	....	....	....	....	1	....	....	....	....	....	....	....
Bet. 3 and 12 mos.	....	....	....	....	....	1	....	....	....	....	....	....
Bet. 1 and 2 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 2 and 3 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs.	....	....	....	....	....	....	....	1	....	....	....	....
Bet. 4 and 5 yrs.	....	....	....	....	....	....	....	....	....	1	....	....
Bet. 5 and 9 yrs.	....	....	....	....	1	....	....	....	....	1	....	....
Bet. 10 and 14 yrs.	2	....	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs.	1	....	....	....	2	....	....	....	1	1	....	....
Bet. 20 and 24 yrs.	1	1	1	....	....	2	1	....	....	1	....	....
Bet. 25 and 29 yrs.	....	....	....	2	1	....	2	1	1	1	....	....
Bet. 30 and 34 yrs.	....	....	....	....	1	4	1	1	1	1	....	1
Bet. 35 and 39 yrs.	3	....	2	1	....	....	2	1	....	1	2	1
Bet. 40 and 44 yrs.	2	....	1	1	2	1	....	1	1	1	....	1
Bet. 45 and 49 yrs.	4	2	1	4	4	3	2	....	....	2	1	1
Bet. 50 and 54 yrs.	3	2	3	2	1	....	3	1	3	5	....	....
Bet. 55 and 59 yrs.	4	1	....	2	4	2	1	2	2	....	....	1
Bet. 60 and 64 yrs.	4	2	1	2	3	4	1	....	4	1	2	....
Bet. 65 and 69 yrs.	4	5	1	1	2	4	2	3	3	2	....	....
Bet. 70 and 74 yrs.	3	3	....	1	2	2	....	1	....	2	....	....
Bet. 75 and 79 yrs.	....	....	....	....	1	2	....	....	....	....	1	....
Bet. 80 and 84 yrs.	....	....	....	1	....	1	....	....	2	1	....	....
Bet. 85 and 89 yrs.	1	2	....	1	1	....	....	....	....	....	....	....
Bet. 90 and 94 yrs.	....	....	....	....	1	....	....	....	....	....	....	....
Bet. 95 and 99 yrs.	....	....	....	....	....	....	....	1	....	....	....	....
Total	32	18	10	18	27	27	15	13	19	21	6	5

HEART DISEASES.

Age, Months, Color and Sex, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F	M.	F.	M.	F.	M.	F.	M.	F	M.	F.	M.	F
....	....	....	....	....	1	....	....	....	....	....	....	3	4	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	....	....	....	1	....	....	....	....	....	....	....	1	1	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	....	....	....	1	....	....	....
....	....	....	....	1	....	....	....	....	....	....	....	1	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	1	....	....	....	....	....	....	1	....	....	4	3	1	..
....	1	....	....	....	1	....	....	....	1	....	....	5	8	1	..
....	....	1	....	....	....	....	....	....	1	1	....	7	8	3	..
1	....	....	....	2	....	1	....	1	1	....	....	10	9	5	1
....	1	1	....	....	....	1	....	1	1	1	2	11	7	7	1
1	....	....	1	....	....	1	....	....	....	6	1	9	10	15	6
....	2	3	....	1	2	2	....	3	1	2	....	13	13	21	7
1	....	....	1	2	1	....	2	1	1	1	....	10	12	12	9
1	....	3	3	3	3	....	2	....	1	4	....	28	26	14	20
1	2	2	2	2	4	....	....	3	2	2	4	29	21	18	22
3	1	1	1	4	3	1	....	6	5	1	....	41	18	7	11
2	2	....	1	3	....	....	2	2	2	....	1	34	32	10	13
2	5	1	1	6	2	....	....	5	5	....	1	44	42	8	10
5	7	1	2	6	1	....	1	7	10	....	3	43	50	3	15
1	2	1	....	2	5	1	....	1	1	....	1	15	33	7	9
4	4	....	1	....	....	....	....	2	....	1	....	10	21	1	4
1	1	....	....	....	3	....	....	....	1	....	1	9	17	....	3
....	....	....	....	....	....	....	....	1	....	....	....	2	....	1	2
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
23	28	15	13	33	26	7	7	34	34	19	14	340	337	135	140

HEART DISEASES.

TABLE No. 3—*Showing Deaths by Occupation and Social Condition, Year* 1913.

Actors	2	Foremen	5
Attorneys	1	Fruit dealers	1
Agents (commission)	4	Fish dealers	1
Agents (insurance)	2	Fishermen	1
Bakers	2	Factory hands	2
Barbers	2	Farmers	7
Bartenders	2	Farm laborers	3
Boarding house keepers	1	Firemen (stationary engine)	2
Brokers (commercial)	2	Firemen (Fire Department)	1
Butchers	2	Gaugers	2
Bankers	1	Grocers	1
Builders and contractors	4	Gardeners	2
Bricklayers	3	Glassblowers	1
Blacksmiths	2	Harnessmakers	1
Bootblacks	2	Horse dealers	1
Bookkeepers, clerks	14	Housewives	141
Boat captains	1	Hodcarriers	2
Bookbinders	1	Hucksters	1
Canvassers	2	Hostlers	3
Carpenters	9	Inventors	1
Charwomen	1	Inspectors	1
Chauffeurs	1	Ironworkers	2
Cement workers	1	Jobbers	1
Confectioners	1	Janitors	1
Caulkers	1	Laborers	103
Collectors	1	Launderers or laundresses	22
Church visitors	1	Laundry work (steam)	2
Coachmen	2	Lawyers	1
Canmakers	1	Locksmiths	2
Cigarmakers	4	Lumber dealers	1
Cooks	16	Machinists	6
Coopers	2	Moulders	2
Cutters	1	Merchants	12
Drivers	9	Managers	1
Dressmakers and seamstresses	8	Mechanics	1
Dairymen	1	Messengers	2
Draftsmen	1	Midwives	1
Dredgers	1	Milliners	1
Druggists	1	Mill hands	2
Domestics	77	Ministers	1
Electrical workers	1	Musicians	2
Engineers (mechanical)	1	Music teachers	2
Engineers (civil)	1	Nurses	4
Engineers (stationary engine)	4	Oyster shuckers	1
Elevator boys	1	Oilers (not specified)	1

HEART DISEASES.

TABLE NO. 3 (Continued)—*Showing Deaths by Occupation and Social Condition, Year 1913.*

Oystermen	2
Painters	5
Plasterers	1
Patternmakers	1
Packers	3
Pavers	1
Physicians	4
Plumbers	2
Policemen and watchmen	5
Postoffice employees	1
Produce dealers	1
Porters	5
Processors	1
Religieuse	1
Restaurantkeepers	1
Saloonkeepers	3
Salesmen	12
Saleswomen	1
Seamen	5
Surveyors	1
Steam railway employees	7
Scowmen	1
Street railway employees	5
Shirt factory hands	1
Shoemakers	5
Stonecutters	3
Ship carpenters	1
Storekeepers	2
Secretaries	2
Servants	3
Superintendents	4
Stenographers	1
Stevedores	9
School children	11
Tailors or tailoresses	9
Tanners	2
Teamsters	3
Teachers	3
Tinners	2
Traveling salesmen	2
Veterinary doctors	1
Waiters	12
Watchmakers	1
Weavers	1
No occupation	262

Social Condition.

Unknown	10
Divorced	5
Married	416
Single	209
Widows	228
Widowers	93
Total	961

BRIGHT'S DISEASE.

TABLE No. 1—*Showing Deaths by Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	3	....	....	1	1	....	....
Second	2	1	....	....	2	1	....	....
Third	2	1	1	....	1	....	....	....
Fourth	5	....	1	1	1	2	2	....
Fifth	....	....	1	2	....	....	1	....
Sixth	....	4	....	1	1	3	....	....
Seventh	....	1	....	....	2	1	....	1
Eighth	2	2	....	....	4	....	....	....
Ninth	2	1	....	....	2	1	....	....
Tenth	3	....	1	....	3	....	....	....
Eleventh	2	3	....	....	....	....	2	1
Twelfth	3	3	....	2	4	1	2	....
Thirteenth	2	3	....	....	2	3	....	....
Fourteenth	3	4	1	1	....	3	....	....
Fifteenth	2	....	1	1	5	....	....	....
Sixteenth	4	....	....	1	2	5	1	1
Seventeenth	1	....	....	....	2	1	4	2
Eighteenth	1	2	....	1	1	1	....	....
Nineteenth	5	2	2	1	1	2	1	....
Twentieth	1	4	1	....	1	4	....	....
Twenty-first	3	1	1	....	2	3	....	....
Twenty-second	....	....	1	....	1	....	....	2
Twenty-third	1	....	....	1	1	....	1	....
Twenty-fourth	1	2	....	....	2	2	....	....
Bay View	....	....	1	1	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	45	37	12	13	41	34	14	7

BRIGHT'S DISEASE.

Months, Color and Sex, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1	1	....	1	3	1	....	1	2	2	....	....	1	2	....	....
1	1	....	....	2	1	....	....	....	....	....	....	....	1	....	....
2	....	....	....	....	....	....	....	1	....	2	....	1	1	....	....
1	3	3	....	2	4	1	2	2	2	1	....	1	1	2	....
3	1	....	2	....	2	1	1	2	....	....	5	1	2	1	1
1	2	....	....	2	1	1	1	2	3	....	....	....	....	1	....
5	2	....	....	2	3	1	....	2	4	....	....	4	1	....	2
1	3	....	....	1	2	....	....	2	4	....	....	6	....	....	....
3	3	....	....	2	2	....	....	1	1	....	....	....	3	....	1
5	1	....	....	4	1	....	....	....	4	....	....	2	....	1	1
1	....	....	....	1	1	1	....	2	4	2	....	2	1	2	....
4	2	....	2	1	....	....	....	3	1	....	2	1	3	....	....
....	3	....	....	3	3	....	....	....	1	....	....	5	3	....	....
1	2	1	....	4	2	1	....	1	....	1	1	....	1	1	....
1	3	....	1	....	3	1	....	1	1	....	....	2	1	1	2
1	1	....	....	2	3	1	....	2	1	....	....	1	2	1	1
....	1	4	....	1	....	5	3	....	1	1	2	....	....	2	1
....	1	....	....	1	1	....	1	1	1	2	....	1	....	....	....
4	2	....	....	1	....	....	....	2	1	1	....	2	3	1	....
4	3	....	....	2	3	....	....	1	3	....	1	2	1	....	....
2	2	....	1	1	2	1	....	1	2	....	....	2	1	....	1
1	....	1	1	1	1	1	....	2	3	1	1	....	2	1	....
1	....	....	....	2	1	1	1	2	1	....	1	2	1	1	1
4	....	....	....	1	....	....	1	1	4	....	....	2	1	....	....
....	....	....	....	....	....	1	1	....	....	2	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
47	37	9	8	30	37	17	12	33	44	13	13	30	31	15	11

Continued on next page

BRIGHT'S DISEASE.

TABLE NO. 1 (Continued)—*Showing Deaths by*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F	M.	F.	M.	F.
First	1	2	1	....	....	2	....	....	3	1	....	....
Second	1	....	....	....	2	....	....	....	....	....	....	....
Third	....	1	....	....	....	2	1	....	2	....	....	....
Fourth	2	2	....	....	4	....	1	....	2	1	1	....
Fifth	1	....	....	....	1	....	....	2	1	1	1	....
Sixth	1	1	....	....	3	1	....	1	2	1	1	1
Seventh	2	1	....	....	5	1	....	....	2	2	....	....
Eighth	....	1	....	....	....	....	1	....	2	2	1	....
Ninth	1	1	....	....	2	....	....	....	....	....	....	....
Tenth	2	1	....	1	....	1	....	....	....	2	....	....
Eleventh	....	1	1	....	1	1	1	....	1	2	1	1
Twelfth	....	....	1	1	1	1	....	....	1	1	....	....
Thirteenth	4	1	....	....	2	1	....	....	4	....	....	....
Fourteenth	2	1	....	....	1	....	1	1	2	1	....	1
Fifteenth	1	....	....	1	1	1	....	....	1	1	....	....
Sixteenth	1	1	....	....	....	....	....	1	2	1	....	....
Seventeenth	....	....	2	5	3	1	....	....	....	1	1	1
Eighteenth	1	2	....	1	2	2	1	1	....	....	....	....
Nineteenth	2	2	....	....	1	1	1	1	1	....	....	....
Twentieth	....	....	....	1	1	3	....	....	4	2	....	....
Twenty-first	3	....	1	....	1	....	....	2	1	2	....	....
Twenty-second	....	....	....	1	1	....	1	....	2	....	....	1
Twenty-third	....	1	....	2	2	1	....	....	3	....	1	....
Twenty-fourth	1	3	....	....	2	1	....	....	....	2	....	....
Bay View	....	....	1	....	1	2	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	26	22	7	13	37	22	8	9	36	23	7	5

BRIGHT'S DISEASE.

Wards, Months, Color and Sex, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	2	....	....	....	....	....	....	4	....	....	....	16	17	1	2
....	3	....	....	....	2	....	....	....	2	....	....	10	12	....	....
2	2	....	....	1	....	....	....	3	....	....	....	15	7	4	....
2	2	*2	1	4	1	....	....	2	2	1	....	28	20	15	4
1	1	1	....	....	....	....	....	1	....	1	1	11	7	7	14
2	1	....	1	1	1	....	....	....	3	....	1	15	21	3	6
1	1	....	....	....	1	....	....	2	2	....	....	27	20	1	3
5	1	....	....	....	2	....	....	3	2	....	....	26	19	2	....
2	1	....	....	....	2	....	....	3	....	....	1	18	15	....	2
....	1	....	....	....	3	1	1	1	2	....	1	20	16	3	4
....	....	....	1	1	2	....	2	2	5	....	1	13	20	10	6
4	1	1	1	2	....	2	....	....	3	....	....	24	16	6	8
....	3	....	....	....	....	....	....	1	2	....	....	23	23	....	....
1	3	....	1	....	1	2	....	2	1	....	....	17	19	8	5
3	4	2	1	....	2	....	....	2	2	....	....	19	18	5	6
1	2	1	....	....	....	....	2	1	2	....	1	17	18	4	7
....	....	....	....	....	....	2	1	1	1	3	....	8	6	24	15
2	....	....	....	5	2	....	....	....	....	....	....	15	12	3	4
....	1	....	1	1	3	1	....	1	3	....	....	21	20	7	3
....	3	....	....	2	1	....	....	3	2	1	....	21	29	2	2
1	....	....	....	1	1	....	1	3	1	....	1	21	15	3	6
....	....	....	1	....	2	1	1	3	1	2	1	11	9	9	9
2	2	1	1	1	2	....	1	....	1	1	....	17	10	6	8
....	1	....	....	1	....	....	....	2	3	....	....	17	19	....	1
....	....	....	....	....	....	....	....	....	....	....	....	2	2	5	2
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
29	35	8	9	20	28	9	9	40	40	9	8	432	390	128	117

*One Chinese.

BRIGHT'S DISEASE.

TABLE NO. 2—*Showing Deaths by Age,*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos	1	....	....	....	....	1	....	....
Bet. 1 and 2 yrs	....	....	....	....	....	....	....	....
Bet. 2 and 3 yrs	....	....	....	....	1	....	....	1
Bet. 3 and 4 yrs	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs	1	....	....	....	....	....	....	....
Bet. 10 and 14 yrs	....	....	....	....	....	1	....	....
Bet. 15 and 19 yrs	2	....	....	....	....	1	....	....
Bet. 20 and 24 yrs	1	1	2	1	....	....	1	....
Bet. 25 and 29 yrs	2	2	1	....	1	1	....	....
Bet. 30 and 34 yrs	....	3	1	....	1	1	....	....
Bet. 35 and 39 yrs	1	3	....	....	....	1	1	1
Bet. 40 and 44 yrs	2	1	2	2	2	1	2	1
Bet. 45 and 49 yrs	1	1	....	2	6	3	1	1
Bet. 50 and 54 yrs	2	2	2	2	1	5	2	1
Bet. 55 and 59 yrs	7	....	....	2	7	2	1	2
Bet. 60 and 64 yrs	4	5	1	1	4	1	2	....
Bet. 65 and 69 yrs	8	3	1	1	8	6	3	....
Bet. 70 and 74 yrs	7	5	1	2	5	5	....	....
Bet. 75 and 79 yrs	5	7	1	....	2	2	....	....
Bet. 80 and 84 yrs	1	2	....	....	2	2	....	....
Bet. 85 and 89 yrs	....	2	....	....	1	....	1	....
Bet. 90 and 94 yrs	....	....	....	....	....	1	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	45	37	12	13	41	34	14	7

BRIGHT'S DISEASE.

Months, Color and Sex, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	I	....	....	....	....	....	....	....	....	....	....	....	....	....	I
I	....	....	....	....	....	....	....	....	I	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	I	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	I	....	....	....	....	....	....	....	....	....	I	....	I	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
I	....	....	....	....	....	....	....	....	I	....	....	....	....	....	I
I	....	....	....	I	2	I	....	....	I	....	....	2	2	....	....
I	2	2	....	2	2	I	2	3	2	I	I	2	....	I	....
3	2	I	....	3	2	I	....	I	4	....	2	....	....	2	I
2	3	I	....	2	2	I	I	....	I	I	I	I	2	....	I
4	2	I	....	2	2	I	3	....	3	I	....	I	I	I	2
2	7	....	2	3	2	4	I	4	3	2	I	3	3	I	....
7	5	....	2	7	3	2	I	....	2	I	I	5	I	2	3
8	5	2	2	4	5	I	....	3	5	3	....	4	2	4	I
5	3	I	....	2	5	3	I	6	2	I	I	5	8	I	I
2	3	....	2	2	3	....	I	4	6	I	2	6	2	I	....
3	I	I	....	5	4	I	I	5	5	....	2	5	5	I	....
5	2	....	....	I	3	I	I	5	2	2	....	4	2	....	....
I	....	....	....	4	....	....	....	I	5	....	I	I	I	....	....
I	....	....	....	I	2	....	....	....	I	....	....	....	....	I	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	I	....	....
47	37	9	8	39	37	17	12	33	44	13	13	39	31	15	11

Continued on next page.

BRIGHT'S DISEASE.

Table No. 2 (Continued)—*Showing Deaths by*

Ages.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month												
Bet. 1 and 3 mos.												
Bet. 3 and 12 mos.							1					
Bet. 1 and 2 yrs.	1								1		1	
Bet. 2 and 3 yrs.			1									
Bet. 3 and 4 yrs.												
Bet. 4 and 5 yrs.												
Bet. 5 and 9 yrs.									1			1
Bet. 10 and 14 yrs.					1							
Bet. 15 and 19 yrs.		1			1					1		1
Bet. 20 and 24 yrs.			1						1			
Bet. 25 and 29 yrs.	2				2				2	2		
Bet. 30 and 34 yrs.	2	1	1		1	3				1		
Bet. 35 and 39 yrs.	1	1	1	4	2	1	2	1	1	1		
Bet. 40 and 44 yrs.		3	2		2	1	1	1	1	2	2	
Bet. 45 and 49 yrs.	3	3		1	2	1		1	2		1	1
Bet. 50 and 54 yrs.	4	1			6	2	3	4	6	4		1
Bet. 55 and 59 yrs.	3	1		2	7	1			7	2	1	
Bet. 60 and 64 yrs.	2	2	1	1	2	3		1	3	2	1	
Bet. 65 and 69 yrs.	3	3		1	5	2	1	1	3	1		
Bet. 70 and 74 yrs.	1	1		1	2	2			5	4	1	1
Bet. 75 and 79 yrs.	2	1		2	2	4			2	2		
Bet. 80 and 84 yrs.	2	3		1	2	2				1		
Bet. 85 and 89 yrs.		1							1			
Bet. 90 and 94 yrs.												
Bet. 95 and 99 yrs.												
Total	26	22	7	13	37	22	8	9	36	23	7	5

BRIGHT'S DISEASE.

Age, Months, Color and Sex, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	....	....	....	1	....	....	....	2	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	1	3	1	1
....	....	....	....	....	....	....	1	....	....	....	....	3	1	1	1
....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	1
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	2	3	....	2
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
1	....	....	....	....	....	....	....	....	....	....	....	5	4	....	2
3	1	....	....	....	....	....	....	....	....	....	....	9	7	5	1
....	....	....	1	3	....	....	....	1	....	....	....	21	11	6	4
1	3	....	1	....	1	....	1	1	3	1	3	13	24	7	8
2	1	3	....	....	....	2	1	1	3	....	1	13	19	12	11
3	....	....	2	1	1	2	....	2	3	5	2	20	20	20	13
2	4	*2	3	2	3	1	....	4	1	1	1	34	31	13	14
1	1	1	....	....	2	3	1	2	1	1	....	41	29	17	16
2	4	....	....	3	2	1	1	4	6	1	....	59	35	14	10
1	5	....	....	....	5	....	3	7	3	....	1	41	44	11	10
6	5	1	1	3	6	....	1	8	6	....	....	58	46	8	10
5	3	1	....	3	3	....	....	3	3	....	....	49	41	6	7
....	5	....	1	2	4	....	....	4	5	....	....	34	39	4	4
2	1	....	....	1	1	....	....	2	4	....	....	19	22	....	2
....	1	....	....	1	....	....	....	....	1	....	....	5	8	2	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
29	35	8	9	20	28	9	9	40	40	9	8	432	399	128	117

*One Chinese.

BRIGHT'S DISEASE.

TABLE No. 3—*Showing Deaths by Occupation and Social Condition, Year* 1913.

Actors	1
Attorneys	3
Art workers	1
Agents (commission)	1
Agents (insurance)	1
Agents (real estate)	3
Agents (not specified)	1
Architects	1
Bakers	7
Barbers	1
Bartenders	1
Boilermakers	1
Butchers	4
Builders and contractors	3
Brickmakers	1
Bricklayers	2
Blacksmiths	4
Boxmakers	1
Bookkeepers, clerks	17
Boat captains	1
Carpenters	13
Cashiers	1
Chauffeurs	1
Chambermaids	2
Carpet cleaners	1
Candymakers	1
Cabinetmakers	1
Collectors	3
Coachmen	1
Cigarmakers	4
Cooks	13
Coopers	1
Cutters	3
Cloth pressers	2
Drivers	7
Dressmakers and seamstresses	6
Druggists	1
Dentists	1
Domestics	70
Dyers	1
Editors and journalists	1
Engineers (mechanical)	1
Engineers (civil)	1
Engineers (stationary engine)	8
Foremen	6
Furniture movers	2
Fruit dealers	1
Farmers	8
Farm laborers	2
Firemen (stationary engine)	3
Grocers	3
Gold and silversmiths	1
Gardeners	4
Gilders	1
Hatters	1
Housewives	214
Hodcarriers	3
Hucksters	3
Ice dealers	1
Ironworkers	2
Jobbers	1
Janitors	4
Junk dealers	1
Laborers	108
Launderers or laundresses	20
Laundry work (steam)	1
Lawyers	2
Liquor dealers	1
Locksmiths	1
Lumber dealers	2
Machinists	7
Polishers	2
Manufacturers	2
Machine manufacturers	1
Moulders	2
Merchants	12
Managers	2
Mechanics	2
Messengers	1
Millers	1
Ministers	1
Musicians	3
Music teachers	1
Nurses	3
Newspaper carriers	1
Oyster shuckers	2
Oystermen	1
Painters	15
Piano makers	1
Plasterers	1
Packers	2
Pavers	1

BRIGHT'S DISEASE.

TABLE No. 3 (Continued)—*Showing Deaths by Occupation and Social Condition, Year* 1913.

Paperhangers	2
Peddlers	1
Physicians	1
Plumbers	2
Policemen and watchmen	9
Produce dealers	1
Porters	14
Printers and engravers	3
Religieuse	4
Reporters	1
Restaurantkeepers	3
Saloonkeepers	5
Salesmen	9
Saleswomen	3
Sailmakers	1
Seamen	5
Solicitors	1
Straw hat makers	2
Steam railway employees	8
Street railway employees	7
Shoemakers	4
Stonecutters	1
Sextons	1
Ship carpenters	3
Storekeepers	2
Servants	6
Superintendents	3
Stenographers	2
Stevedores	5
School children	3
Tailors or tailoresses	12
Tanners	1
Teamsters	3
Tinners	1
Telephone operators	1
Upholsterers	1
Undertakers	1
Varnishers	1
Waiters	4
Wheelwrights	1
Woodworkers	1
No occupation	269

Social Condition.

Unknown	9
Divorced	6
Married	528
Single	215
Widows	202
Widowers	107
Total	1,067

TYPHOID FEVER.

Table No. 1—*Showing Deaths by Wards,*

Wards.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....
Second	....	....	....	1	1	1	....	....
Third	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	1	....
Sixth	....	....	....	....	....	....	1	....
Seventh	....	....	....	....	....	....	....	....
Eighth	1	....	....	....	....	....	....	....
Ninth	....	....	....	....	1	....	....	....
Tenth	....	....	....	....	....	....	....	....
Eleventh	....	....	1	....	....	....	....	....
Twelfth	1	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	1	....	....	....
Fourteenth	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	1	....	....	....
Seventeenth	....	....	1	....	....	....	....	....
Eighteenth	....	1	....	....	1	....	....	....
Nineteenth	....	1	....	....	....	1	....	....
Twentieth	....	....	....	....	....	1	....	....
Twenty-first	....	....	....	....	1	....	....	....
Twenty-second	....	....	....	....	....	....	....	....
Twenty-third	1	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	1	....	....	....
Bay View	....	....	....	....	....	1	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	3	2	2	1	7	4	2	....

TYPHOID FEVER.

Color, Sex and Calendar Months, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	1	....	....	....
....	....	....	....	....	....	1	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	1	....	....	....	....	1	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	1	....	....	....	....	....	....	1	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
5	2	....	1	....	2	1	....	....	4	2	....	5	3	1	....

Continued on next page.

TYPHOID FEVER.

TABLE No. 1 (Continued)—*Showing Deaths by*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First										1		
Second		1							2			
Third												
Fourth			1	1	4			1	2			
Fifth												1
Sixth		1				1						
Seventh				1		1		1				2
Eighth										2		
Ninth		1			1				1			
Tenth					1	1				1		
Eleventh												
Twelfth			1		1							
Thirteenth										1		
Fourteenth								2				2
Fifteenth				2				1				1
Sixteenth					2				1			
Seventeenth						1						
Eighteenth							1		1			
Nineteenth			2									
Twentieth					1				1	1		
Twenty-first	1			1								
Twenty-second								1		1		
Twenty-third		2			1							
Twenty-fourth									1			
Bay View									1			1
Sydenham												
Total	1	5	4	5	11	4	1	6	10	7	....	7

TYPHOID FEVER.

Wards, Color, Sex and Calendar Months, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	1	....	....	....	....	....	....	....	....	....	....	3	4	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	9	....	1	2
....	1	1	....	1	....	....	....	....	....	....	....	1	1	2	2
....	....	....	....	....	....	....	1	1	....	....	....	2	3	1	1
....	....	....	....	....	....	....	....	....	....	....	....	....	2	1	4
....	....	....	....	....	....	....	....	....	....	....	....	1	3	....	....
1	....	....	....	....	....	....	....	....	....	....	....	4	2	1	....
....	....	....	....	....	....	....	....	1	....	....	....	3	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	2	....
....	....	....	1	....	....	....	1	1	1	....	....	3	1	1	2
1	....	....	....	....	....	....	....	....	....	....	....	3	1	....	....
....	....	....	1	....	1	....	1	....	....	....	....	....	1	....	6
2	....	....	....	....	1	....	....	....	....	....	....	3	1	....	4
....	....	....	1	1	....	....	....	....	....	....	....	5	1	....	1
....	....	....	1	....	....	....	....	....	....	....	....	....	1	2	1
....	....	1	....	....	....	....	....	....	....	....	....	2	1	2	....
....	....	....	....	....	....	....	....	....	....	....	....	2	3	2	....
....	....	....	....	....	....	....	....	....	....	....	....	3	2	....	....
1	....	....	....	....	....	....	....	....	....	1	....	3	....	1	1
1	....	....	....	....	....	....	....	....	....	....	....	1	3	....	1
....	1	....	1	....	....	....	....	....	....	....	....	2	3	....	1
....	1	....	....	....	1	....	....	....	....	....	....	3	3	....	....
1	....	....	....	....	....	....	....	....	....	....	....	2	1	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
8	4	2	5	2	3	....	3	3	1	1	....	55	41	16	28

TYPHOID FEVER.

TABLE NO. 2—*Showing Deaths by Age, Sex,*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs	....	....	....	....	....	....	....	....
Bet. 2 and 3 yrs	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs	....	1	....	....	....	....	....	....
Bet. 4 and 5 yrs	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs	....	....	....	....	1	....	....	....
Bet. 10 and 14 yrs	1	....	....	....	....	....	1	....
Bet. 15 and 19 yrs	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs	1	1	2	....	....	1	....	....
Bet. 25 and 29 yrs	1	....	....	1	4	1	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	1	....	....
Bet. 40 and 44 yrs	....	....	....	....	1	1	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	1	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	1	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	3	2	2	1	7	4	2	....

TYPHOID FEVER.

Color and Calendar Months, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	1	1	1	....
....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	1	....	....	....	....	....	....	....	1	....	....	....
1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....
1	....	....	....	....	....	....	....	....	1	1	....	1	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
5	2	....	1	....	2	1	....	....	4	2	....	5	3	1	....

Continued on next page.

TYPHOID FEVER.

TABLE NO. 2 (Continued)—*Showing Deaths by*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs.	....	....	....	....	....	....	....	....	1	....	....	....
Bet. 2 and 3 yrs.	....	....	....	....	....	1	....	....	....	....	....	....
Bet. 3 and 4 yrs.	....	....	....	....	1	....	....	....	....	....	....	....
Bet. 4 and 5 yrs.	....	....	....	....	1	....	....	....	....	....	....	....
Bet. 5 and 9 yrs.	....	1	....	....	....	....	....	....	....	....	....	1
Bet. 10 and 14 yrs.	....	....	....	....	....	....	....	2	....	....	....	1
Bet. 15 and 19 yrs.	....	1	....	....	1	....	....	....	1	2	....	2
Bet. 20 and 24 yrs.	1	....	1	....	4	1	....	2	1	3	....	1
Bet. 25 and 29 yrs.	....	1	3	2	....	....	....	....	2	2	....	....
Bet. 30 and 34 yrs.	....	1	....	2	2	....	....	....	....	....	....	....
Bet. 35 and 39 yrs.	....	....	....	....	1	....	....	....	3	....	....	1
Bet. 40 and 44 yrs.	....	1	....	....	....	1	....	....	1	....	....	1
Bet. 45 and 49 yrs.	....	....	....	....	1	....	....	1	....	....	....	....
Bet. 50 and 54 yrs.	....	....	....	1	....	1	1	1	....	....	....	....
Bet. 55 and 59 yrs.	....	....	....	....	....	....	....	....	1	....	....	....
Bet. 60 and 64 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Total	1	5	4	5	11	4	1	6	10	7	....	7

TYPHOID FEVER.

Age, Sex, Color and Calendar Months, Year 1913.

October.				November.				December.				Total			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	1	....	....	....	....	1	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	1	....	....	....	....	....	....	....	....	....	....	1	1	1	....
1	....	....	....	....	....	....	....	....	....	....	....	2	2	....	1
....	....	....	1	....	1	....	....	....	1	....	....	1	4	1	4
1	3	....	1	....	1	....	....	1	....	....	....	4	8	....	3
....	....	....	1	....	1	....	....	2	....	....	....	11	8	4	4
3	....	....	....	1	....	....	....	....	....	1	....	11	5	4	4
....	....	....	....	1	....	....	1	....	....	....	....	5	2	....	3
1	....	1	....	....	....	....	....	....	....	....	....	6	1	2	1
....	....	....	1	....	....	....	1	....	....	....	....	5	3	....	3
1	....	1	1	....	....	....	....	....	....	....	....	4	3	3	2
....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	2
....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
8	4	2	5	2	3	....	3	3	1	1	....	55	41	16	28

TYPHOID FEVER.

Table No. 3—*Showing Deaths by Occupation, and Social Condition, Year* 1913.

Bakers	2	Mechanics	1
Brokers (commercial)	1	Milliners	1
Builders and contractors	2	Mill hands	1
Bookkeepers, clerks	6	Ministers	2
Carpet cleaners	1	Nurses	1
Chauffeurs	1	Oyster shuckers	1
Cigarmakers	2	Painters	1
Cooks	2	Plumbers	2
Coopers	1	Policemen and watchmen	1
Drivers	2	Porters	1
Dressmakers and seamstresses	2	Roofers	1
Draftsmen	1	Salesmen	1
Domestics	14	Steam railway employees	3
Engineers (stationary engine)	1	Street railway employees	1
Farmers	4	Shoemakers	2
Housewives	13	Servants	2
Hucksters	1	Stevedores	1
Ironworkers	1	School children	9
Jobbers	1	Tailors or tailoresses	1
Laborers	10	Typesetters	1
Launderers or laundresses	3	Ushers in theatres	1
Machinists	2	Woodsawyers	1
Merchants	1	No occupation	30

Social Condition.

Married	53	Unknown	2
Single	77		
Widows	7	Total	140
Widowers	1		

TYPHOID FEVER.

TABLE NO. 1—*Showing Deaths by Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	1	1	....	....	....	1	....	....
Second	....	....	....	....	....	....	....	....
Third	....	....	1	....	....	....	1	....
Fourth	....	....	....	....	....	1	....	....
Fifth	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....
Eighth	1	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....
Eleventh	1	....	1	....	....	....	....	....
Twelfth	....	....	....	....	....	1	....	....
Thirteenth	....	....	....	....	....	1	....	....
Fourteenth	....	....	....	....	....	1	....	....
Fifteenth	....	1	....	....	....	....	....	....
Sixteenth	1	1	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....
Twenty-third	2	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	1	1	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	6	3	2	....	1	6	1	....

TYPHOID FEVER.

Months, Color and Sex, Year 1905.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	1	....	....	....	1	....	....	....	....
2	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	1	....	....	....	....	....	....	....	1	....
....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
2	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
....	....	....	1	....	....	....	....	....	1	1	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
4	3	1	1	2	1	2	1	3	3	1	1	1	2	2	....

Continued on next page.

TYPHOID FEVER.

Table No. 1 (Continued)—*Showing Deaths by*

Wards.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	1	....	....	2	2	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....	2	3	....	....
Third	1	1	....	....	....	....	....	....	....	....	....	1
Fourth	....	....	....	....	....	....	1	....	....	2	....	1
Fifth	1	....	....	....	1	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....	....	1	....	....
Seventh	....	....	....	....	1	....	....	....	....	....	2	....
Eighth	1	....	....	....	1	....	....	....	....	....	....	....
Ninth	....	1	....	....	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	1	1	....	2	....	1	....	....
Eleventh	....	....	....	....	1	1	....	1	....	1	1	....
Twelfth	....	....	....	....	2	....	....	....	1	....	....	....
Thirteenth	....	....	....	....	1	1	....	....	....	1	....	....
Fourteenth	1	....	....	....	....	....	2	....	1	....	1	2
Fifteenth	1	....	....	....	1	....	....	....	1	1	1	....
Sixteenth	....	....	....	....	1	....	....	....	2	....	....	....
Seventeenth	....	....	....	....	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....	....	1	....	....
Nineteenth	1	....	....	....	1	....	....	....	1	....	....	....
Twentieth	....	....	....	....	....	2	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....	1	....	....	....
Twenty-second	....	....	....	....	....	1	....	....	1	1	....	....
Twenty-third	1	....	....	....	2	....	1	....	....	....	....	....
Twenty-fourth	....	....	....	....	1	....	....	....	2	1	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	7	3	....	....	16	8	4	3	12	13	5	4

TYPHOID FEVER.

Wards, Months, Color and Sex, Year 1905.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	1	....	....	....	1	....	....	....	....	....	....	4	7	....	....
2	1	....	....	....	1	1	....	....	....	....	....	6	5	1	....
....	....	....	....	....	2	....	....	....	....	....	....	1	3	2	1
....	....	....	....	2	2	....	....	1	....	....	....	3	6	1	1
....	....	....	....	....	1	....	....	....	....	....	....	2	1	....	2
1	1	....	....	2	....	....	....	....	....	....	....	5	3	....	....
....	....	....	....	....	....	....	....	....	1	....	....	1	2	2	....
1	....	....	....	....	....	....	....	....	....	....	....	5	....	....	....
1	1	....	....	1	1	....	....	....	1	....	....	3	4	....	....
....	1	1	....	....	....	....	....	....	....	....	....	1	4	3	2
1	....	....	....	1	1	1	2	....	....	....	....	4	4	3	3
....	....	1	....	1	....	....	....	....	....	....	....	4	1	1	...
....	....	....	....	....	....	....	....	....	....	....	....	1	3	....	....
....	1	....	....	2	....	....	....	1	....	....	1	5	2	3	3
....	2	....	1	....	....	....	....	....	....	1	....	3	5	2	1
1	....	....	1	....	1	1	....	....	....	....	....	7	2	2	1
....	....	....	....	....	1	1	....	....	....	....	....	....	2	2	1
....	....	....	....	1	1	....	....	1	....	....	....	2	2	....	....
1	....	....	....	1	....	....	....	....	....	1	....	5	1	2	....
1	....	....	....	1	1	....	....	....	....	....	....	3	3	....	....
1	....	....	1	1	1	....	....	....	....	....	....	3	2	....	1
1	....	....	....	....	1	....	....	....	....	....	....	2	3	....	....
....	1	....	....	2	....	....	....	....	....	....	....	7	1	2	....
....	1	....	....	....	....	....	....	....	....	....	....	4	3	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11	10	2	3	15	15	4	2	3	2	2	1	81	69	26	16

TYPHOID FEVER.

TABLE NO. 2—*Showing Deaths by*

AGES.	January.				February.			
	White		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs	....	....	....	....	....	....	....	....
Bet. 2 and 3 yrs	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs	....	....	....	....	....	1	....	....
Bet. 10 and 14 yrs	....	....	....	....	1	....	....	....
Bet. 15 and 19 yrs	2	....	....	....	....	1	....	....
Bet. 20 and 24 yrs	1	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	2	....	....	....	....	....	....
Bet. 30 and 34 yrs	2	....	1	....	....	....	....	....
Bet. 35 and 39 yrs	1	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	1	1	....
Bet. 45 and 49 yrs	....	....	....	....	....	2	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	....	1	....	....
Bet. 60 and 64 yrs	....	1	1	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	6	3	2	....	1	6	1	....

TYPHOID FEVER.

Months, Age, Color and Sex, Year 1905.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
....	....	....	....	....	....	....	....	1	2	1	....	....	....	....	....
....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	1	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	1	1	....	....	1	....	1	....
1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....
....	1	....	....	....	....	1	1	....	....	....	....	....	....	....	....
1	1	1	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
4	3	1	1	2	1	2	1	3	3	1	1	1	2	2	....

Continued on next page.

TYPHOID FEVER.

TABLE No. 2 (Continued)—*Showing Deaths by*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month....	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos.	....	....	....	....	....	....	....	...	....	....	....	....
Bet. 3 and 12 mos.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs..	....	....	....	....	....	....	....	....	1	....	1	....
Bet. 2 and 3 yrs..	....	....	....	....	....	....	....	....	....	1	....	....
Bet. 3 and 4 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs..	....	1	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs..	....	1	....	....	....	....	....	....	1	....	....	....
Bet. 10 and 14 yrs..	1	....	....	....	2	1	....	....	1	1	1	1
Bet. 15 and 19 yrs..	1	....	....	....	3	2	2	....	2	1	1	1
Bet. 20 and 24 yrs..	1	....	....	....	2	2	....	1	2	2	....	....
Bet. 25 and 29 yrs..	....	....	....	....	3	1	....	2	2	1	1	1
Bet. 30 and 34 yrs..	3	....	....	....	1	....	1	....	....	....	....	1
Bet. 35 and 39 yrs..	....	1	....	....	2	1	....	....	....	....	1	....
Bet. 40 and 44 yrs..	....	....	....	....	....	....	1	....	....	3	....	....
Bet. 45 and 49 yrs..	....	....	....	....	....	....	....	....	1	....	....	....
Bet. 50 and 54 yrs..	....	....	....	....	1	1	....	....	1	2	....	....
Bet. 55 and 59 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs..	....	....	....	....	2	....	....	....	1	....	....	....
Bet. 65 and 69 yrs..	....	....	....	....	....	....	....	....	....	1	....	....
Bet. 70 and 74 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs..	....	....	....	....	....	....	....	....	....	1	....	....
Bet. 80 and 84 yrs..	1	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs..	....	....	....	....	....	....	....	....	....	....	....	...
Bet. 90 and 94 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Total...........	7	3	....	....	16	8	4	3	12	13	5	4

TYPHOID FEVER.

Months, Age, Color and Sex, Year 1905.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....
....	....	....	....	....	....	....	....	....	....	....	1	1	1	....	1
1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	1	....	....	....	....	....	....	1	2	....
....	....	....	....	....	1	....	....	....	....	....	....	2	5	1	....
2	....	....	....	....	3	....	....	1	1	....	....	9	6	1	2
....	1	....	1	2	2	1	1	....	....	1	....	11	9	5	3
2	2	....	....	4	4	....	....	....	....	1	....	14	11	2	1
3	....	....	1	3	1	1	....	....	....	....	....	12	5	2	5
1	2	....	....	1	2	1	....	1	....	....	....	9	5	4	2
1	1	....	....	3	....	....	....	....	....	....	....	8	5	2	....
....	2	....	....	1	....	....	1	....	....	....	....	1	7	2	1
1	2	1	....	....	1	....	....	....	....	....	....	3	5	1	....
....	....	....	1	....	....	....	....	1	....	....	....	3	3	....	1
....	....	....	....	1	....	....	....	....	1	....	....	1	2	....	....
....	....	1	....	....	1	....	....	....	....	....	....	4	2	3	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11	10	2	3	15	15	4	2	3	2	2	1	81	69	26	16

TYPHOID FEVER.

TABLE No 3—*Showing Deaths by Occupation and Social Condition, Year* 1905.

Architects	1	Lawyers	1
Butchers	1	Marble polishers	1
Builders and contractors	1	Merchants	3
Blacksmiths	1	Meter makers	1
Bookkeepers, clerks	13	Messengers	1
Coal dealers	1	Ministers	1
Cigarmakers	1	Newspaper carriers	1
Cooks	1	Painters	1
Drivers	3	Policemen and watchmen	2
Dressmakers and seamstresses	3	Produce dealers	1
Draftsmen	2	Printers and engravers	1
Druggists	1	Religieuse	1
Domestics	6	Salesmen	2
Elevator boys	1	Sailmakers	1
Factory hands	1	Seamen	1
Farmers	4	Steam railway employees	3
Hair Dressers	1	Stone cutters	1
Housewives	24	Servants	2
Hodcarriers	1	School children	7
Inspectors	1	Teachers	1
Ironworkers	1	Undertakers	2
Janitors	1	Varnishers	1
Laborers	14	Waiters	2
Launderers or laundresses	2	No occupation	68

Social Condition.

Married	78	Widowers	3
Single	107		
Widows	4	Total	192

TYPHOID FEVER.

Table No. 1—*Showing Deaths by Wards,*

Wards.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....
Second	1	....	....	....	....	1	....	....
Third	....	....	....	....	1	....	....	....
Fourth	....	....	....	1	....	....	1	....
Fifth	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....
Eighth	1	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....
Eleventh	1	....	....	....	....	....	1	....
Twelfth	....	....	....	....	....	....	....	....
Thirteenth	2	....	....	....	....	1	....	....
Fourteenth	1	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....
Eighteenth	....	....	1	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....
Twentieth	....	1	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....
Twenty-third	....	1	....	....	....	1	....	....
Twenty-fourth	2	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	8	2	1	1	1	3	2	....

TYPHOID FEVER.

Color, Sex and Months, Year 1906.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	2	....	....	2	4	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	1	....	1	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
..	2	1	1	3	5	2	1	5	6	....	1	3	1	....	....

Continued on next page.

TYPHOID FEVER.

TABLE NO. 1 (Continued)—*Showing Deaths by*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	2	....	....	....	....	....	....	....
Second	....	1	....	....	....	1	....	....	....	....	....	....
Third	....	....	....	....	....	1	....	....	....	....	....	....
Fourth	....	....	2	1	1	1	....	....	4	2	....	....
Fifth	....	....	....	1	1	....	....	2	1	....	....	....
Sixth	....	....	....	....	....	....	....	....	....	....	....	....
Seventh	1	....	....	....	....	1	....	....	....	....	2	....
Eighth	....	....	....	....	....	....	....	....	....	1	1	....
Ninth	....	....	1	....	1	1	1	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	1	....	....	....
Eleventh	....	....	....	1	....	2	1	....	1	....	....	....
Twelfth	....	....	....	....	....	1	....	....	....	....	....	....
Thirteenth	....	1	....	....	2	....	....	....	1	1	....	....
Fourteenth	....	....	....	....	....	....	....	1	....	....	1	....
Fifteenth	....	....	....	....	1	1	....	....	....	1	....	....
Sixteenth	1	....	....	....	....	....	....	....	....	2	....	....
Seventeenth	....	....	....	....	....	....	....	....	1	....	1	1
Eighteenth	....	....	....	....	....	....	....	....	....	....	....	....
Nineteenth	2	....	....	....	....	....	1	1	1	1	....	....
Twentieth	1	....	....	....	1	1	....	....	....	....	....	....
Twenty-first	....	....	....	1	1	....	....	....	4	....	1	....
Twenty-second	....	....	....	....	1	1	....	....	....	....	....	....
Twenty-third	....	....	....	1	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....	....	1	1	....
Bay View	....	....	....	....	....	....	....	....	1	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	5	2	3	5	11	11	3	4	15	9	7	1

TYPHOID FEVER.

Wards, Color, Sex and Months, Year 1906.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	2	....	....	....	....	....	....	....	....	....	....	3	2	....	....
1	....	....	....	1	2	....	....	....	....	....	....	3	6	....	....
....	....	....	....	1	....	....	....	....	....	....	....	2	1	....	....
1	....	1	....	....	....	....	....	1	....	....	1	7	3	4	3
....	....	....	....	1	1	....	....	....	....	....	....	3	1	....	3
....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....
....	....	1	....	....	....	1	....	....	....	....	....	1	2	4	1
....	....	1	....	....	....	....	....	....	....	....	....	3	1	2	....
....	....	....	....	....	....	....	....	1	....	....	....	3	1	2	....
....	1	....	....	....	....	....	....	....	1	....	....	1	2	....	....
....	....	....	....	....	1	....	....	....	....	....	....	2	3	2	2
3	....	....	....	....	....	....	....	....	....	....	....	3	1	....	....
....	....	....	....	....	....	....	....	1	1	....	....	10	10	....	....
2	....	....	1	....	....	....	....	1	....	....	....	4	....	1	2
....	....	....	....	1	1	....	....	....	....	....	....	2	3	1	....
....	....	....	....	....	....	....	....	....	....	....	....	1	2	2	....
....	....	....	....	....	....	1	....	....	....	....	....	1	1	2	2
....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....
2	....	....	....	1	....	....	....	1	....	....	....	7	2	1	1
....	1	....	....	....	....	....	....	....	1	....	....	3	4	....	....
....	....	1	....	1	2	....	....	....	....	....	....	6	3	2	1
2	....	....	1	....	....	....	....	....	....	....	....	3	2	....	1
....	....	....	....	....	....	....	....	1	....	....	....	1	2	....	1
1	....	....	....	....	....	....	....	....	....	....	....	3	2	1	....
1	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
13	4	4	2	6	7	2	....	6	3	....	1	76	55	25	17

TYPHOID FEVER.

Table No. 2—*Showing Deaths by Age.*

Ages.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos.	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos.	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs.	....	....	....	....	....	....	....	....
Bet. 2 and 3 yrs.	1	....	....	....	....	....	1	....
Bet. 3 and 4 yrs.	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs.	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs.	....	....	1	..	....	....	....	....
Bet. 10 and 14 yrs.	....	....	....	1	...	....	....	....
Bet. 15 and 19 yrs.	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs.	2	1	....	....	1	1	....	...
Bet. 25 and 29 yrs.	2	....	....	....	....	1	1	...
Bet. 30 and 34 yrs.	....	....	....	....	....	.	....	....
Bet. 35 and 39 yrs.	....	1	....	....	....	....	....	...
Bet. 40 and 44 yrs.	1	....	....	....	....	1	....	....
Bet. 45 and 49 yrs.	1	....	....	....	....	....	....	...
Bet. 50 and 54 yrs.	1	....	....	....	....	....	....	....
Bet. 55 and 59 yrs.	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs.	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs.	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs.	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs.	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs.	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs.	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs.	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs.	....	....	....	....	....	....	....	....
Total	8	2	1	1	1	3	2	....

TYPHOID FEVER.

Color, Sex and Months, Year 1906.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....
....	....	....	...	1	....	....	....	....	....	....	....	....	....	....	....
....	....	....	...	1	....	....	....	1	....	....	....	....	....	....	....
....	....	....	1	....	....	....	....	....	1	....	....	....	....	....	....
....	....	1	....	....	2	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	1	....	1	2	....	....	....	....	....	....
....	1	....	....	1	....	....	....	1	....	....	....	1	1	....	....
....	....	....	....	....	1	1	....	....	....	....	....	1	....	....	....
....	....	....	....	....	1	....	1	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	1	....	....	....	....	....	....	1	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	2	1	1	3	5	2	1	5	6	....	1	3	1	....	....

Continued on next page.

TYPHOID FEVER.

TABLE No. 2 (Continued)—*Showing Deaths*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month....	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs..	....	....	....	....	....	....	....	....	1	....	....	....
Bet. 2 and 3 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs..	....	....	....	1	1	....	....	....	....	1	....	....
Bet. 10 and 14 yrs..	....	....	1	....	1	1	1	1	1	2	....	....
Bet. 15 and 19 yrs..	....	1	....	1	2	2	1	2	4	....	2	....
Bet. 20 and 24 yrs..	3	....	1	1	2	2	....	....	....	4	2	1
Bet. 25 and 29 yrs..	1	....	....	....	2	3	1	....	1	....	1	....
Bet. 30 and 34 yrs..	....	....	....	1	1	1	....	1	1	....	1	....
Bet. 35 and 39 yrs..	1	....	1	....	1	....	....	....	2	....	....	....
Bet. 40 and 44 yrs..	....	....	....	....	1	2	....	....	1	1	1	....
Bet. 45 and 49 yrs..	....	....	....	1	....	....	....	....	1	1	....	....
Bet. 50 and 54 yrs..	....	....	....	....	....	....	....	....	1	....	....	....
Bet. 55 and 59 yrs..	....	1	....	....	....	....	....	....	1	....	....	....
Bet. 60 and 64 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs..	....	....	....	....	....	....	....	....	1	....	....	....
Bet. 80 and 84 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Total..........	5	2	3	5	11	11	3	4	15	9	7	1

TYPHOID FEVER.

by Age, Color, Sex and Months, Year 1906.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	1	1	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	3	1	1	1
1	1	....	....	....	1	....	....	....	1	....	....	3	7	2	3
1	....	....	....	....	1	....	....	1	1	....	....	9	7	4	3
3	....	1	2	....	....	1	....	....	....	....	1	12	10	6	5
3	2	3	....	3	1	....	....	2	....	....	....	17	9	6	....
....	....	....	....	....	1	....	....	1	....	....	....	4	3	2	2
1	....	....	....	1	....	....	....	1	....	....	....	7	2	1	1
1	1	....	....	....	....	....	....	1	....	....	....	6	6	1	....
....	....	....	....	....	1	....	....	....	....	....	....	2	3	....	1
1	....	....	....	2	2	....	....	....	....	....	....	6	4	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
1	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	....	....	....	....	....	1	....	....	....	....	....	....	....	1	....
1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
13	4	4	2	6	7	2	....	6	3	....	1	76	55	25	17

TYPHOID FEVER.

TABLE NO. 3—*Showing Deaths by Occupation and Social Condition, Year* 1906.

Artists	1
Barbers	1
Boilermakers	1
Bookkeepers, clerks	7
Carpenters	1
Cabinetmakers	1
Cooks	2
Conductors (not specified)	1
Dressmakers and seamstresses	1
Draftsmen	1
Domestics	6
Engineers (stationary engine)	2
Foremen	2
Farmers	4
Farm laborers	1
Gold and silversmiths	1
Hatters	1
Housewives	25
Ironworkers	1
Laborers	25
Merchants	1
Mill hands	2
Nurses	1
Painters	1
Peddlers	1
Policemen and watchmen	1
Produce dealers	1
Printers and engravers	1
Restaurant keepers	1
Saloon keepers	1
Salesmen	1
Saleswomen	1
Seamen	1
Steam railway employees	4
Street railway employees	1
Shoemakers	1
Servants	1
Steamfitters	1
Stenographers	2
School children	8
Tailors or tailoresses	1
Teachers	1
Waiters	3
Waitresses	1
No occupation	50

Social Condition.

Married	68
Single	97
Widowers	2
Widows	3
Unknown	3
Total	173

SCARLET FEVER.

TABLE NO. 1—*Showing Deaths by Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	2	....	....	....
Second	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	*1	....	....
Fifth	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	*1	....	....
Seventh	....	1	....	....	1	1	....	....
Eighth	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	*1	....	....	....
Eleventh	....	....	....	....	....	....	....	....
Twelfth	....	1	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....
Twenty-third	*1	....	....	....	....	....	....	....
Twenty-fourth	1	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	2	2	....	....	4	3	....	....

---

*Died in Sydenham.

SCARLET FEVER.

Months, Color and Sex, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	1	....	....	....	....	....	....	1	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2	....	....	....	*1	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	*1	*1	....	....	2	1	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2	1	....	1	5	2	....	....	2	1	1	....	....	2	....	....

Continued on next page.

SCARLET FEVER.

Table No. 1 (Continued)—*Showing Deaths by*

Wards.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....	....	....	....	....
Second	....	1	....	....	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	....	....
Fifth	1	....	....	....	....	....	....	....	*1	....	....	....
Sixth	....	....	....	....	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	1	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....	....	1	....	....
Seventeenth	....	....	....	....	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-third	1	....	....	....	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	1	....	....	....	....	....	....	....	....	....	....
Total	2	2	....	....	1	....	....	....	1	1	....	....

*Died in Sydenham.

SCARLET FEVER.

Wards, Months, Color and Sex, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	*1	....	....	....	3	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	3	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	3	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	2	....	....	....	....	....	....	1	....	....	....	1	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1
*1	....	....	....	....	....	....	....	....	....	....	....	1	....	1	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	....	....	....	4	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	3	....	....	....
....	1	....	....	....	....	....	....	....	1	....	....	4	5	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
1	3	....	....	1	....	....	....	3	1	....	1	24	18	1	2

SCARLET FEVER.

TABLE No. 2—*Showing Deaths by Age,*

AGES	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos	....	1	....	....	....	....	....	....
Bet. 1 and 2 yrs	2	....	....	....	1	....	....	....
Bet. 2 and 3 yrs	....	....	....	....	....	1	....	....
Bet. 3 and 4 yrs	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs	....	1	....	....	1	....	....	....
Bet. 5 and 9 yrs	....	....	....	....	....	2	....	....
Bet. 10 and 14 yrs	....	....	....	....	2	....	....	....
Bet. 15 and 19 yrs	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	2	2	....	....	4	3	....	....

SCARLET FEVER.

Months, Color and Sex, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....
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2	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2	1	....	1	5	2	....	....	2	1	1	....	....	2	....	....

Continued on next page.

SCARLET FEVER.

TABLE No. 2 Continued)—*Showing Deaths by*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs.	1	2	....	....	1	....	....	....	....	....	....	....
Bet. 2 and 3 yrs.	....	....	....	....	....	....	....	....	....	1	....	....
Bet. 3 and 4 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs.	1	....	....	....	....	....	....	....	1	....	....	....
Bet. 10 and 14 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Total	2	2	....	....	1	....	....	....	1	1	....	....

SCARLET FEVER.

Age, Months, Color and Sex, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	2	....	....	....	7	4	....	....
....	....	....	....	....	....	....	....	1	....	....	....	3	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	2	....	....
....	1	....	....	....	....	....	....	....	1	....	....	4	3	....	....
....	1	....	....	1	....	....	....	....	....	....	1	5	5	....	1
....	1	....	....	....	....	....	....	....	....	....	....	2	1	....	1
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
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1	3	....	....	1	....	....	....	3	1	....	1	24	18	1	2

SCARLET FEVER.

TABLE NO. 1—*Showing Deaths by Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	1	....	....	....	1	....	....	....
Second	....	1	1	....	....	....	....	....
Third	....	....	....	....	....	1	....	....
Fourth	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	1	....	....	....
Sixth	1	....	....	....	....	....	....	....
Seventh	....	1	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	1	....	....	....
Thirteenth	....	....	....	....	....	....	....	....
Fourteenth	1	1	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....
Seventeenth	....	1	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	3	4	1	....	3	1	....	....

SCARLET FEVER.

Months, Color and Sex, Year 1905.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....
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....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
3	2	....	....	3	1	....	1	....	....	....	....	....	1	....	....

Continued on next page.

SCARLET FEVER.

TABLE No. 1 (Continued)—*Showing Deaths*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....	2	....	....	....
Twenty-third	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	....	....	....	....	....	....	....	....	2	....	....	....

SCARLET FEVER.

by Wards, Months, Color and Sex, Year 1905.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	2	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....
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....	....	....	....	....	....	....	....	....	....	1	....	....	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	2	....	....	....	3	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
1	....	....	....	....	....	....	....	....	....	....	....	3	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	2	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2	....	....	....	....	....	....	....	2	2	1	....	18	11	2	1

SCARLET FEVER.

TABLE No. 2—*Showing Deaths by Ages,*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos	....	1	....	....	....	....	....	....
Bet. 1 and 2 yrs	....	....	....	....	3	1	....	....
Bet. 2 and 3 yrs	1	....	1	....	....	....	....	....
Bet. 3 and 4 yrs	1	1	....	....	....	....	....	....
Bet. 4 and 5 yrs	....	1	....	....	....	....	....	....
Bet. 5 and 9 yrs	1	....	....	....	....	....	....	....
Bet. 10 and 14 yrs	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs	....	1	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	3	4	1	....	3	1	....	....

SCARLET FEVER.

Months, Color and Sex, Year 1905.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	1	....	....	....	....	....	....	....	1	....	....
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3	2	....	....	3	1	....	1	....	....	....	....	....	1	....	....

Continued on next page.

SCARLET FEVER.

TABLE NO. 2 (Continued)—*Showing Deaths*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month....	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 2 and 3 yrs..	....	....	....	....	....	....	....	....	1	....	....	....
Bet. 3 and 4 yrs..	....	....	....	....	....	....	....	....	1	....	....	....
Bet. 4 and 5 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Total........	....	....	....	....	....	....	....	....	2	....	....	....

SCARLET FEVER.

by Ages, Months, Color and Sex, Year 1905.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	2	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	3	1	....	....
1	....	....	....	....	....	....	....	1	....	....	....	5	....	1	....
....	....	....	....	....	....	....	....	....	1	1	....	4	2	1	....
....	....	....	....	....	....	....	....	....	....	....	....	1	2	....	....
....	....	....	....	....	....	....	....	1	....	....	....	3	2	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
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2	....	....	....	....	....	....	....	2	2	1	....	18	11	2	1

SCARLET FEVER.

TABLE No. 1—Showing Deaths by Wards,

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	1	....	....
Sixth	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....
Twentieth	....	1	....	....	1	1	....	....
Twenty-first	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	....	1	....	....	1	2	....	....

SCARLET FEVER.

Months, Color and Sex, Year 1906.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	2	....	....	....	....	....	....	....	1	....	....	....	....	....	....
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....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	1	1	....	....	....	....	1	....	....	1	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	1	2	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	4	....	....	2	4	....	....	2	4	1	....	....	3	....	....

Continued on next page.

SCARLET FEVER.

TABLE No. 1 (Continued)—*Showing Deaths*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored	
	M.	F.	M.	F.	M.	F.	M	F.	M.	F.	M.	F.
First	1	....	....	....	1	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	1	....	....	1	1	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....	....	....	....	....
Sixth	....	1	....	....	....	....	....	....	1	....	....	....
Seventh	....	....	....	....	....	....	....	....	....	....	....	....
Eighth	1	....	....	....	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	1	....	....	....	....	....	....	....
Eleventh	....	....	....	1	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....	....	....	....	....
Twentieth		1	....	....	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	1	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....	1	1	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	2	2	....	1	2	2	....	....	3	2	....	....

SCARLET FEVER.

by Wards, Months, Color and Sex, Year 1906.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	2	3	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	3	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....
....	1	....	....	....	....	....	....	....	....	....	....	1	2	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	1	3	....	....
....	....	....	....	....	1	....	....	....	1	....	....	....	4	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	3	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	1	....	....	....	1	....	....	....	2	....	....	13	28	1	1

SCARLET FEVER.

TABLE NO. 2—*Showing Deaths by Ages,*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs	....	....	....	....	1	....	....	....
Bet. 2 and 3 yrs	....	....	....	....	....	1	....	....
Bet. 3 and 4 yrs	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs	....	1	....	....	....	1	....	....
Bet. 10 and 14 yrs	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	....	...
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	...
Total	....	1	....	....	1	2	....	....

SCARLET FEVER.

Months, Color and Sex, Year 1906.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....
....	1	....	....	2	....	....	....	1	....	....	....	....	1	....	....
....	1	....	....	....	2	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	4	....	....	2	4	....	....	2	4	1	....	....	3	....	....

Continued on next page.

SCARLET FEVER.

Table No. 2 (Continued)—*Showing Deaths*

Ages.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month....	....	....	....	...	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos..	....	....	..	...	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs..	....	....	....	...	...	....	....	....	1	1	....	....
Bet. 2 and 3 yrs..	....	1	....	....	1	....	....	....	1	....	....	....
Bet. 3 and 4 yrs..	1	1	....	1	....	....	....	....	....	1	....	....
Bet. 4 and 5 yrs..	....	....	....	....	1	2	....	....	1	....	....	....
Bet. 5 and 9 yrs..	1	....	....	....	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs..	....	....	....	....	....	....	....	....	....	....	....	...
Bet. 20 and 24 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs..	....	....	....	....	....	....	....	....	....	...	....	....
Bet. 35 and 39 yrs..	....	....	....	....	....	....	....	....	....	...	....	....
Bet. 40 and 44 yrs..	....	....	....	....	....	....	....	...	....	...	....	....
Bet. 45 and 49 yrs..	...	....	....	...	....	....	....	...	....	....	....	....
Bet. 50 and 54 yrs..	....	....	....	....	....	....	....	....	....	....	....	...
Bet. 55 and 59 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs..	....	...	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs..	....	....	..	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs..	....	....	....	...	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs..	....	....	....	..	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs..	....	....	....	...	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs..	....	....	...	....	....	....	....	....	....	....	....	...
Bet. 95 and 99 yrs..	....	....	....	....	....	....	....	....	....	....	....	...
Total........	2	2	....	1	2	2	....	....	3	2	....	....

SCARLET FEVER.

by Ages, Months, Color and Sex, Year 1906.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
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....	1	....	....	....	....	....	....	....	....	....	....	5	4	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	5	....	....
1	....	....	....	....	....	....	....	....	....	....	....	2	5	....	1
....	....	....	....	....	1	....	....	....	....	....	....	2	4	....	....
....	....	....	....	....	....	....	....	....	2	....	....	1	8	....	....
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1	1	....	....	....	1	....	....	....	2	....	....	13	28	1	1

SCARLET FEVER.

TABLE No. 1—*Showing Deaths by Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....
Second	....	....	....	.. .	....	....	....	....
Third	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....
Fifth	....	1	....	....	....	....	....	...
Sixth	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....
Twenty-fourth	1	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	1	1	....	....	....	....	....	....

SCARLET FEVER.

Months, Color and Sex, Year 1907.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	1	....	....	....	....	....	....	1	1	....	....	....	1	....	....

Continued on next page.

SCARLET FEVER.

TABLE NO. 1 (Continued)—*Showing Deaths by*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....	1	....	....	....
Twenty-third	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	....	....	....	....	....	....	....	....	1	....	....	....

SCARLET FEVER.

Wards, Months, Color and Sex, Year 1907.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	1	....	....	....	....	....	....	1	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	2	....	....	1	1	....	....	2	....	....	....	7	7	....	....

SCARLET FEVER.

TABLE NO. 2—*Showing Deaths by Ages,*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs	....	....	....	....	....	....	....	....
Bet. 2 and 3 yrs	....	1	....	....	....	....	....	....
Bet. 3 and 4 yrs	1	....	....	....	....	....	....	....
Bet. 4 and 5 yrs	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	1	1	....	....	....	....	....	....

SCARLET FEVER.

Months, Color and Sex, Year 1907.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	1	....	....	....	....	....	....	1	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	1	....	....	....	....	....	....	1	1	....	....	....	1	....	....

Continued on next page.

SCARLET FEVER.

Table No. 2 (Continued)—*Showing Deaths*

Ages.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 2 and 3 yrs.	....	....	....	....	....	....	....	....	1	....	....	....
Bet. 3 and 4 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Total	....	....	....	....	....	....	....	....	1	....	....	....

SCARLET FEVER.

by Ages, Months, Color and Sex, Year 1907.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	1	....	....	....	....	....	....	2	3	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	1	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	1	....	....	....	1	....	....	....
....	....	....	....	1	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	2	....	....	1	1	....	....	2	....	....	....	7	7	....	....

SCARLET FEVER.

TABLE NO. 1—*Showing Deaths by Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....
Third	....	1	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	1	....	....	....
Sixth	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	1	....	....
Tenth	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	1	....	....
Twelfth	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	1	....	....
Sixteenth	....	....	....	....	....	1	....	....
Seventeenth	1	2	....	....	....	....	....	....
Eighteenth	....	....	....	....	1	1	....	....
Nineteenth	....	1	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	1	....	....
Twenty-second	....	....	....	....	....	....	....	....
Twenty-third	....	2	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	1	....	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	1	6	....	....	3	6	....	....

SCARLET FEVER.

Months, Color and Sex, Year 1908.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	1	1	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	2	1	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
....	....	....	....	....	....	....	....	1	....	1	....	....	1	....	....
....	1	....	....	1	3	....	....	1	....	....	....	....	1	....	....
1	....	....	....	....	....	....	....	....	1	....	....	1	....	....	....
....	....	....	....	1	1	....	1	....	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
8	3	....	....	2	5	....	1	7	5	1	....	1	4	1	....

Continued on next page.

SCARLET FEVER.

Table No. 1 (Continued)—*Showing Deaths*

Wards.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	1	....	....	....	....	1	....	....
Eighth	....	....	....	....	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fifteenth	....	1	....	....	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....	....	....	....	....
Nineteenth	2	1	....	....	1	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....	....	1	....	....
Twenty-first	1	....	....	....	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-third	1	1	....	....	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	...
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	4	3	....	....	2	....	....	....	....	2	....	....

SCARLET FEVER.

by Wards, Months, Color and Sex, Year 1908.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	3	1	....	....
....	1	....	....	....	....	....	....	....	....	....	....	2	4	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	1	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	3	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	2	1	....
....	....	....	....	....	....	....	....	....	....	....	....	2	2	1	....
....	....	....	....	....	....	....	....	....	....	....	....	5	7	....	....
....	....	....	....	....	1	....	....	....	....	....	....	2	3	....	....
....	....	....	....	....	....	....	1	....	....	....	....	2	3	....	2
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	5	3	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	2	....	....	....	1	....	1	....	....	....	....	29	37	2	2

SCARLET FEVER.

TABLE NO. 2—*Showing Deaths by Ages,*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos	....	....	....	....	....	1	....	....
Bet. 1 and 2 yrs	....	....	....	....	....	1	....	....
Bet. 2 and 3 yrs	....	....	....	....	1	2	....	....
Bet. 3 and 4 yrs	....	2	....	....	1	....	....	....
Bet. 4 and 5 yrs	....	2	....	....	....	....	....	....
Bet. 5 and 9 yrs	1	....	....	....	1	1	....	....
Bet. 10 and 14 yrs	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	2	....	....	....	1	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	1	6	....	....	3	6	....	....

SCARLET FEVER.

Months, Color and Sex, Year 1908.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	1	1	....	....	....	....	....
....	....	....	....	....	1	....	....	3	....	....	....	....	1	....	....
....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	1	....	....	....	....	....	....	....	1	....	....	....	3	....	....
4	....	....	....	1	....	....	1	....	....	....	....	....	....	....	....
3	....	....	....	1	2	....	....	4	2	....	....	1	....	1	....
1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
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....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
8	3	....	....	2	5	....	1	7	5	1	....	1	4	1	....

Continued on next page.

SCARLET FEVER.

TABLE No. 2 (Continued)—*Showing Deaths*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month....	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 2 and 3 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs..	2	....	....	....	1	....	....	....	....	....	....	....
Bet. 4 and 5 yrs..	....	....	....	....	....	....	....	....	....	1	....	....
Bet. 5 and 9 yrs..	2	1	....	....	1	....	....	....	....	1	....	....
Bet. 10 and 14 yrs..	....	1	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs..	....	1	....	....	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Total........	4	3	....	....	2	....	....	....	....	2	....	....

SCARLET FEVER.

by Ages, Months, Color and Sex, Year 1908.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	2	1	....
1	....	....	....	....	....	....	....	....	....	....	....	4	3	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	4	....	....
....	....	....	....	....	....	....	....	....	....	....	....	4	7	....	....
....	....	....	....	....	....	....	....	....	....	....	....	5	3	....	1
....	1	....	....	....	1	....	....	....	....	....	....	14	9	1	....
....	....	....	....	....	....	....	1	....	....	....	....	1	2	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	4	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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1	2	....	....	....	1	....	1	....	....	....	....	29	37	2	2

SCARLET FEVER.

TABLE No. 1—*Showing Deaths by Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....
Third	....	1	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....
Thirteenth	1	....	....	....	1	....	....	....
Fourteenth	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	1	....	....
Nineteenth	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	1	1	....	....	1	1	....	....

SCARLET FEVER.

Months, Color and Sex, Year 1909.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
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3	....	....	....	....	....	....	....	1	....	....	....	1	....	....	....

Continued on next page

SCARLET FEVER.

TABLE No. I (Continued)—*Showing Deaths by*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....	1	2	....	....
Sixth	1	....	....	....	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	1	....	....	....	....	....	....	....	1	2	....	....

SCARLET FEVER.

Wards, Months, Color and Sex, Year 1909.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	2	2	....	....
....	....	....	....	....	1	....	....	....	1	....	....	2	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
1	....	....	....	....	....	....	....	....	1	....	....	1	1	....	....
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2	1	....	....	....	1	....	....	2	3	....	....	13	9	....	....

SCARLET FEVER.

TABLE NO. 2—*Showing Deaths by Ages,*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs	....	....	....	....	1	....	....	....
Bet 2 and 3 yrs	1	....	....	....	....	....	....	....
Bet. 3 and 4 yrs	...	....	....	....	....	....	....	....
Bet. 4 and 5 yrs	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs	....	....	....	....	....	1	....	....
Bet. 10 and 14 yrs	....	1	....	....	....	....	....	....
Bet. 15 and 19 yrs	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	1	1	....	....	1	1	....	....

SCARLET FEVER.

Months, Color and Sex, Year 1909.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
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3	....	....	....	....	....	....	....	1	....	....	....	1	....	....	....

Continued on next page.

SCARLET FEVER.

TABLE No. 2 (Continued)—*Showing Deaths*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month												
Bet. 1 and 3 mos.												
Bet. 3 and 12 mos.												
Bet. 1 and 2 yrs.										1		
Bet. 2 and 3 yrs.												
Bet. 3 and 4 yrs.	1								1			
Bet. 4 and 5 yrs.												
Bet. 5 and 9 yrs.										1		
Bet. 10 and 14 yrs.												
Bet. 15 and 19 yrs.												
Bet. 20 and 24 yrs.												
Bet. 25 and 29 yrs.												
Bet. 30 and 34 yrs.												
Bet. 35 and 39 yrs.												
Bet. 40 and 44 yrs.												
Bet. 45 and 49 yrs.												
Bet. 50 and 54 yrs.												
Bet. 55 and 59 yrs.												
Bet. 60 and 64 yrs.												
Bet. 65 and 69 yrs.												
Bet. 70 and 74 yrs.												
Bet. 75 and 79 yrs.												
Bet. 80 and 84 yrs.												
Bet. 85 and 89 yrs.												
Bet. 90 and 94 yrs.												
Bet. 95 and 99 yrs.												
Total	1								1	2		

SCARLET FEVER.

by Ages, Months, Color and Sex, Year 1909.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
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1	....	....	....	....	....	....	....	1	....	....	....	4	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	1	2	....	....	3	5	....	....
1	1	....	....	....	....	....	....	....	....	....	....	2	2	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2	1	....	....	....	1	....	....	2	3	....	....	13	9	....	....

SCARLET FEVER.

Table No. 1—*Showing Deaths by Wards.*

Wards.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....
Sixth	....	1	....	....	2	....	....	....
Seventh	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....
Tenth	1	....	....	....	1	....	....	....
Eleventh	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	1	....	....	....
Twenty-first	1	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	1	....	....	....
Twenty-third	....	1	....	....	....	1	....	....
Twenty-fourth	1	1	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	3	3	....	....	5	1	....	....

SCARLET FEVER.

Months, Color and Sex, Year 1910.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
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1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
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3	3	....	1	4	3	....	....	3	3	....	....	1	1	....	....

Continued on next page.

SCARLET FEVER.

TABLE No. 1 (Continued)—*Showing Deaths*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F
First	....	....	....	....	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....	....	1	....	....
Ninth	....	....	....	....	....	1	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fourteenth	....	....	1	....	....	....	....	....	....	....	....	....
Fifteenth	1	....	....	....	....	....	....	....	....	....	....	....
Sixteenth	....	1	....	....	1	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	1	1	1	....	1	1	....	....	....	1	....	....

SCARLET FEVER.

by Wards, Months, Color and Sex, Year 1910.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	2	1	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	2	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	1	2	....	....
....	....	....	....	....	....	....	....	....	1	....	....	2	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
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....	....	....	....	....	1	....	....	....	....	....	....	....	2	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
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....	....	....	....	1	....	....	....	....	....	....	....	4	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	1	....	....
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...	....	....	....	2	1	....	....	1	5	....	....	24	23	1	1

SCARLET FEVER.

Table No. 2—*Showing Deaths by Ages,*

Ages.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs	....	....	....	....	1	....	....	....
Bet. 2 and 3 yrs	....	2	....	....	....	....	....	....
Bet. 3 and 4 yrs	2	....	....	....	2	....	....	....
Bet. 4 and 5 yrs	....	....	....	....	2	....	....	....
Bet. 5 and 9 yrs	1	1	....	....	....	....	....	....
Bet. 10 and 14 yrs	....	....	....	....	....	1	....	....
Bet. 15 and 19 yrs	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	3	3	....	....	5	1	....	....

SCARLET FEVER.

Months, Color and Sex, Year 1910.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
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I	....	....	....	I	....	....	....	....	....	....	....	....	....	....	....
I	2	....	....	....	I	....	....	....	....	....	....	....	....	....	....
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3	3	....	I	4	3	....	....	3	3	....	....	I	I	....	....

Continued on next page.

SCARLET FEVER.

Table No. 2 (Continued)—*Showing Deaths*

Ages.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 2 and 3 yrs	....	....	1	....	....	1	....	....	....	....	....	....
Bet. 3 and 4 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs	1	1	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs	....	....	....	....	1	....	....	....	....	1	....	....
Bet. 10 and 14 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....	....	....	....	....
Total	1	1	1	....	1	1	....	....	....	1	....	....

SCARLET FEVER.

by Ages, Months, Color and Sex, Year 1910.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	1	1	....	....	....	1	....	....	3	4	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	3	1	....
....	....	....	....	1	....	....	....	....	....	....	....	6	3	....	....
....	....	....	....	....	....	....	....	....	1	....	....	5	3	....	....
....	....	....	....	....	....	....	....	1	1	....	....	7	3	....	....
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....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	2	1	....	....	1	5	....	....	24	23	1	1

SCARLET FEVER.

TABLE NO. 1—*Showing Deaths by Wards.*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored	
	M.	F.	M.	F.	M.	F.	M.	F.
First	1	...	...	...	...	...	...	...
Second	...	...	...	...	...	...	...	...
Third	...	...	...	...	...	...	...	...
Fourth	...	...	...	...	...	...	...	...
Fifth	1	...	...	...	...	...	...	...
Sixth	...	...	...	...	1	1	...	...
Seventh	...	...	...	...	...	...	...	...
Eighth	...	...	...	...	...	...	...	...
Ninth	...	...	...	...	...	...	...	...
Tenth	...	...	...	...	...	...	...	...
Eleventh	...	...	...	...	...	...	...	...
Twelfth	...	...	...	...	1	1	...	...
Thirteenth	...	...	...	...	...	...	...	...
Fourteenth	...	1	...	...	...	...	...	...
Fifteenth	...	...	...	...	...	1	...	...
Sixteenth	...	...	...	...	...	...	...	...
Seventeenth	...	...	...	...	...	...	...	...
Eighteenth	...	...	...	...	...	...	...	...
Nineteenth	...	...	...	...	...	...	...	...
Twentieth	...	1	...	...	...	...	...	...
Twenty-first	...	1	...	...	...	...	...	...
Twenty-second	...	...	...	...	...	...	...	...
Twenty-third	1	...	...	...	...	1	...	...
Twenty-fourth	...	...	...	...	1	...	...	...
Bay View	...	...	...	...	...	...	...	...
Sydenham	...	...	...	...	...	...	...	...
Total	3	3	...	...	3	4	...	...

SCARLET FEVER.

Months, Color and Sex. Year 1911.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
1	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
1	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	1	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
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....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
4	3	....	1	....	4	....	....	1	3	1	1	1	2	....	....

Continued on next page.

SCARLET FEVER.

TABLE No. 1 (Continued)—*Showing Deaths*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....	2	....	....	....
Second	....	....	....	....	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....	1	....	....	....
Fourteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	....	....	....	....	....	....	....	....	3	....	....	....

SCARLET FEVER.

by Wards, Months, Color and Sex, Year 1911.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	4	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	....	....	....	1	....	....	....	....	....	....	....	2	2	....	....
....	....	....	....	1	....	....	....	....	1	....	....	2	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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1	....	....	....	....	....	....	....	1	....	....	....	4	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	2	....	....	....	3	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	2	....	....	....	3	1	....	....	21	20	1	2

SCARLET FEVER.

TABLE NO. 2—*Showing Deaths by Ages,*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos	2	....	....	....	....	....	....	....
Bet. 1 and 2 yrs	....	1	....	....	....	....	....	....
Bet. 2 and 3 yrs	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs	....	....	....	....	2	....	....	....
Bet. 4 and 5 yrs	....	....	....	....	....	2	....	....
Bet. 5 and 9 yrs	1	1	....	....	....	1	....	....
Bet. 10 and 14 yrs	....	....	....	....	1	....	....	....
Bet. 15 and 19 yrs	....	1	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	1	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	...
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	3	3	....	....	3	4	....	....

SCARLET FEVER.

Months, Color and Sex, Year 1911.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	I	....	....	....	I	....	....	....	I	....	....	....	....	....	...
2	....	....	....	....	....	....	....	....	I	....	I	I	I	....	....
I	....	....	....	....	....	....	....	I	....	....	....	....	....	....	....
....	....	....	I	....	I	....	....	....	....	....	....	....	....	....	....
I	2	....	....	....	I	....	....	....	....	I	....	....	I	....	....
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....	....	....	...	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
4	3	....	I	....	4	....	....	I	3	I	I	I	2	....	....

Continued on next page.

SCARLET FEVER.

TABLE No. 2 (Continued)—*Showing Deaths*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs.	....	....	....	....	....	....	....	....	1	....	....	....
Bet. 2 and 3 yrs.	....	....	....	....	....	....	....	....	1	....	....	....
Bet. 3 and 4 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs.	....	....	....	....	....	....	....	....	1	....	....	....
Bet. 20 and 24 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Total	....	....	....	....	....	....	....	....	3	....	....	....

SCARLET FEVER.

by Ages, Months, Color and Sex, Year 1911.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	1	....	....
....	....	....	....	....	....	....	....	1	1	....	....	2	5	....	....
....	....	....	....	....	....	....	....	....	....	....	....	4	2	....	1
....	....	....	....	....	....	....	....	....	....	....	....	4	....	....	....
....	....	....	....	1	....	....	....	1	....	....	....	2	3	....	1
1	....	....	....	1	....	....	....	1	....	....	....	5	6	1	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	2	....	....	....	3	1	....	....	21	20	1	2

DIPHTHERIA.

Table No. 1—*Showing Deaths by Wards,*

Wards.	January.				February.			
	White.		Colored.		White.		Colored	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	1	....	....	....
Second	1	....	....	....	....	....	....	....
Third	*1	1	....	....	1	....	....	....
Fourth	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	1	....	....
Ninth	....	1	....	....	....	....	....	....
Tenth	....	....	....	....	2	....	....	....
Eleventh	....	....	....	....	....	....	....	....
Twelfth	....	....	....	1	....	....	....	....
Thirteenth	....	1	....	....	....	1	....	....
Fourteenth	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	....	2	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....
Eighteenth	....	2	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....
Twenty-second	1	....	....	....	....	....	....	....
Twenty-third	....	....	1	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	3	7	1	1	4	2	....	....

*Died in Sydenham.

DIPHTHERIA.

Months, Color and Sex, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	*1	....	....	....	*1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	1	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	*2	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
....	....	....	....	....	*1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2	....	....	....	2	3	....	....	4	2	....	....	2	3	....	....

Continued on next page.

DIPHTHERIA.

TABLE NO. I (Continued)—*Showing Deaths by*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	1	....	....	....	1	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....	2	....	....	....
Seventh	....	1	....	....	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	....	*1	....	....
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....
Twelfth	....	*1	....	....	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....	1	....	....	....
Seventeenth	....	....	....	....	....	....	....	....	1	....	....	....
Eighteenth	....	....	....	....	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-first	....	1	....	....	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-fourth	1	....	....	....	*1	*2	....	....	1	....	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	1	4	....	....	1	3	....	....	5	1	....	....

*Died in Sydenham.

DIPHTHERIA.

Wards, Months, Color and Sex, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F
1	....	....	....	1	1	....	....	....	....	....	....	3	3	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	5	2	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	1	....	....	2	2	....	....
....	....	....	....	....	....	....	....	1	....	....	1	1	2	....	1
1	....	....	....	....	1	....	....	....	....	....	....	2	4	....	....
....	....	....	....	....	....	....	....	1	1	....	....	1	3	....	....
....	....	....	....	....	1	....	....	....	1	....	....	2	4	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	1	....	....	....	....	....	....	....	....	....	1	2	1	1
....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....
....	....	....	....	....	....	....	....	1	....	1	....	1	....	1	....
1	....	....	....	2	....	....	....	....	1	....	....	5	1	....	....
....	....	....	....	1	1	....	....	....	....	....	....	3	3	....	....
....	....	....	....	1	....	....	....	....	....	....	....	2	....	....	....
....	1	....	....	1	....	....	....	....	....	....	....	1	3	....	....
....	....	....	....	....	....	....	....	....	1	....	....	1	1	....	....
....	....	....	....	....	1	....	....	1	....	....	....	1	2	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	1	1	1	...
....	....	....	....	....	1	....	....	....	....	....	....	3	4	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3	4	1	....	6	7	....	....	4	6	1	1	37	42	3	2

DIPHTHERIA.

Table No. 2—*Showing Deaths by Ages,*

Ages.	January.				February.			
	White.		Colored.		White.		Colored	
	M.	F.	M.	F.	M.	F.	M.	F
Under 1 month....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos.	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos.	....	....	....	....	1	....	....	....
Bet. 1 and 2 yrs.	....	2	....	1	2	....	....	....
Bet. 2 and 3 yrs.	2	3	....	....	1	....	....	....
Bet. 3 and 4 yrs.	1	....	....	....	....	....	....	....
Bet. 4 and 5 yrs.	....	2	....	....	....	1	....	....
Bet. 5 and 9 yrs.	....	....	....	....	....	1	....	....
Bet. 10 and 14 yrs.	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs.	....	....	1	....	....	....	....	....
Bet. 20 and 24 yrs.	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs.	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs.	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs.	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs.	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs.	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs.	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs.	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs.	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs.	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs.	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs.	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs.	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs.	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs.	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs.	....	....	....	....	....	....	....	....
Total.	3	7	1	1	4	2	....	....

DIPHTHERIA.

Months, Color and Sex, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	2	....	....	1	1	....	....	1	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	2	....	....	....	2	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	1	....	....	1	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2	....	....	....	2	3	....	....	4	2	....	....	2	3	....	....

Continued on next page.

DIPHTHERIA.

Table No. 2 (Continued)—*Showing Deaths*

Ages.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos.	1	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs.	....	1	....	....	....	1	....	....	....	....	....	....
Bet. 2 and 3 yrs.	....	2	....	....	....	1	....	....	2	1	....	....
Bet. 3 and 4 yrs.	....	....	....	....	....	....	....	....	1	....	....	....
Bet. 4 and 5 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs.	....	1	....	....	1	1	....	....	2	....	....	....
Bet. 10 and 14 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Total	1	4	....	....	1	3	....	....	5	1	....	....

DIPHTHERIA.

by Age, Months, Color and Sex, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	1	....	....	....	....	....	....	....	3	1	....	....
....	....	....	....	1	2	....	....	....	2	....	....	4	9	....	1
1	....	....	....	2	1	....	....	1	2	....	1	11	13	....	1
....	....	1	....	....	3	....	....	....	....	....	....	3	4	1	....
....	1	....	....	....	....	....	....	2	....	1	....	6	4	1	....
2	1	....	....	2	1	....	....	1	1	....	....	10	9	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3	4	1	....	6	7	....	....	4	6	1	1	37	42	3	2

DIPHTHERIA.

TABLE NO. 1—*Showing Deaths by Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	1	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....
Third	....	....	1	....	....	....	....	....
Fourth	....	....	....	1	....	....	....	....
Fifth	1	....	....	....	....	....	....	....
Sixth	1	1	....	....	....	....	....	....
Seventh	1	....	....	....	....	....	....	....
Eighth	1	1	....	....	....	....	....	1
Ninth	....	....	....	....	....	....	....	....
Tenth	....	1	....	....	....	....	....	....
Eleventh	....	....	....	1	1	....	....	....
Twelfth	....	....	....	....	1	....	....	....
Thirteenth	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	...
Fifteenth	....	....	....	....	....	....	1	....
Sixteenth	1	....	....	....	....	....	....	....
Seventeenth	....	....	....	1	....	1	....	....
Eighteenth	....	....	....	....	....	....	....	....
Nineteenth	1	....	....	....	....	3	....	....
Twentieth	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	7	3	1	3	2	4	1	1

DIPHTHERIA.

Months, Color and Sex, Year 1905.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	1	....	1	1	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	1	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	1	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2	....	....	1	....	3	1	....	1	3	....	....	2	2	....	....

Continued on next page.

DIPHTHERIA.

Table No. 1 (Continued)—*Showing Deaths by*

Wards.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....	....	1	....	....
Second	....	....	....	....	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....	1	....	....	....
Ninth	....	....	....	....	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....
Twelfth	....	1	....	....	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....	....	1	....	....
Fourteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fifteenth	1	....	....	....	....	....	....	....	....	1	....	1
Sixteenth	....	....	....	....	....	....	....	....	....	1	....	....
Seventeenth	....	....	....	....	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....	1	....	....	....
Twentieth	....	....	....	....	....	1	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....	....	....	....	...
Twenty-second	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-third	1	....	....	....	....	2	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	1	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	2	1	....	....	....	4	....	....	2	4	....	1

DIPHTHERIA.

Wards, Months, Color and Sex, Year 1905.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1	....	....	....	2	....	....	....	....	3	....	....	4	4	....	....
1	....	....	....	1	....	....	....	....	....	....	....	2	....	....	....
1	....	....	....	1	2	....	....	....	1	....	....	2	3	1	....
....	....	....	....	....	1	....	....	....	....	....	....	....	1	....	1
....	....	....	....	....	....	....	1	....	1	....	....	1	2	1	2
1	....	....	....	....	....	....	....	1	....	....	....	3	2	....	....
....	....	....	....	....	1	....	....	....	1	....	....	1	2	....	....
....	....	....	....	....	....	....	....	1	....	....	....	3	2	....	1
....	....	....	....	1	....	....	....	....	....	....	....	1	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	1	....	....	1	1	....	1
....	1	....	....	....	....	....	....	....	....	....	....	2	2	....	....
1	1	....	....	....	1	....	....	....	....	....	....	1	3	....	....
....	....	2	....	....	....	....	....	....	....	....	....	....	....	2	....
....	1	....	....	....	....	....	....	1	....	....	....	4	3	1	1
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	2	....	....	....	4	3	....	....
....	....	....	....	2	1	....	....	....	1	....	....	2	3	....	....
....	1	....	....	1	....	....	....	....	....	....	....	1	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	1	....	2	2	1	....
1	....	....	1	1	....	....	....	....	1	....	....	4	3	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
7	4	2	1	9	6	....	1	5	9	1	....	39	43	6	8

DIPHTHERIA.

TABLE NO. 2—*Showing Deaths by Age.*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos	1	....	1	....	1	....	....	....
Bet. 1 and 2 yrs	1	....	....	....	1	1	1	1
Bet. 2 and 3 yrs	3	3	....	1	....	....	....	....
Bet. 3 and 4 yrs	1	....	....	....	....	....	....	....
Bet. 4 and 5 yrs	....	....	....	1	....	1	....	....
Bet. 5 and 9 yrs	1	....	....	1	....	1	....	....
Bet. 10 and 14 yrs	....	....	....	....	....	1	....	....
Bet. 15 and 19 yrs	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	7	3	1	3	2	4	1	1

DIPHTHERIA.

Months, Color and Sex, Year 1905.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	1	....	....	1	1	....	....	1	....	....	....
....	....	....	....	....	1	1	....	....	....	....	....	....	1	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
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....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2	....	....	1	....	3	1	....	1	3	....	....	2	2	....	....

Continued on next page

DIPHTHERIA.

TABLE NO. 2 (Continued)—*Showing Deaths*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month												
Bet. 1 and 3 mos.												
Bet. 3 and 12 mos.												
Bet. 1 and 2 yrs.						3						
Bet. 2 and 3 yrs.	1									2		
Bet. 3 and 4 yrs.									1			
Bet. 4 and 5 yrs.												
Bet. 5 and 9 yrs.	1					1				2		
Bet. 10 and 14 yrs.									1			1
Bet. 15 and 19 yrs.												
Bet. 20 and 24 yrs.		1										
Bet. 25 and 29 yrs.												
Bet. 30 and 34 yrs.												
Bet. 35 and 39 yrs.												
Bet. 40 and 44 yrs.												
Bet. 45 and 49 yrs.												
Bet. 50 and 54 yrs.												
Bet. 55 and 59 yrs.												
Bet. 60 and 64 yrs.												
Bet. 65 and 69 yrs.												
Bet. 70 and 74 yrs.												
Bet. 75 and 79 yrs.												
Bet. 80 and 84 yrs.												
Bet. 85 and 89 yrs.												
Bet. 90 and 94 yrs.												
Bet. 95 and 99 yrs.												
Total	2	1				4			2	4		1

DIPHTHERIA.

by Age, Months, Color and Sex, Year 1905.

October.				November.				December.				Total			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	1
....	....	....	....	1	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	2	2	1	....
1	1	....	1	4	....	....	....	2	2	....	....	12	9	1	2
....	1	....	....	2	2	....	....	2	2	....	....	8	12	1	1
1	1	....	....	1	2	....	....	....	1	....	....	5	5	....	....
3	1	1	....	1	1	....	....	....	....	....	....	4	4	....	1
2	....	....	....	....	....	....	....	1	3	....	....	6	8	....	1
....	....	1	....	....	1	....	....	....	....	....	....	1	2	1	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
....	....	....	....	....	....	....	....	....	....	1	....	....	1	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
7	4	2	1	9	6	....	1	5	9	1	....	39	43	5	8

DIPHTHERIA.

TABLE NO. 1—*Showing Deaths by Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	2	....	....	....	....	....	....
Second	....	....	....	....	....	1	....	....
Third	....	1	....	....	....	1	....	....
Fourth	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	1	....	....	....
Ninth	....	1	....	....	....	2	....	....
Tenth	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....
Nineteenth	1	....	....	2	....	....	....	....
Twentieth	1	....	....	....	....	1	....	....
Twenty-first	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	2	4	....	2	1	5	....	....

DIPHTHERIA.

Months, Color and Sex, Year 1906.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	1	....	....	....	....	....	....	....	....	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	1	....	....	....	....	....	2
1	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
1	....	....	....	....	1	....	....	1	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	1	....	....	1	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	1	....	1	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	1	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
7	....	....	....	3	7	1	1	5	4	....	....	1	2	....	2

Continued on next page.

DIPHTHERIA.

TABLE NO. 1 (Continued)—*Showing Deaths by*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....	....	1	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	....	....
Fifth	....	1	....	....	....	....	....	....	....	....	....	....
Sixth	....	....	1	....	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....	....	1	....	....
Eighth	....	....	....	....	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....	1	....	....	....
Tenth	....	....	....	....	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....	....	1	....	....
Thirteenth	....	....	....	....	....	....	....	....	....	1	....	....
Fourteenth	1	....	....	....	....	....	....	1	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....	....	....	....	....
Sixteenth	....	1	....	....	1	....	....	....	....	2	....	....
Seventeenth	....	....	....	....	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-third	1	....	....	....	....	1	1	....	....	....	....	....
Twenty-fourth	....	1	....	....	....	....	....	....	....	2	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	2	3	1	....	1	1	1	1	1	8	....	....

DIPHTHERIA.

Wards, Months, Color and Sex, Year 1906.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1	4	....	....	....	1	....	....	....	....	....	....	2	7	....	....
1	....	....	....	1	....	....	....	....	1	....	....	2	3	....	....
....	....	....	....	....	....	....	....	....	1	....	....	1	6	....	....
....	....	....	....	1	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	2	....	2
....	....	....	....	....	....	....	....	1	....	....	....	2	1	1	....
....	....	....	....	2	1	....	....	....	....	....	....	3	2	....	....
1	....	....	....	....	....	....	....	1	....	....	....	4	1	....	....
....	....	....	....	....	2	....	....	....	....	....	....	2	5	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	2	....	....	....	3	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	2	....	....
....	....	....	....	....	....	....	....	1	....	1	....	3	....	1	1
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	3	1	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	1	....	....	....	....	1	....	....	....	....	....	....	2	1	....
1	....	....	....	....	....	....	....	....	....	....	....	2	1	....	2
....	1	....	....	....	....	....	....	....	....	....	....	1	3	....	....
....	1	....	....	1	....	....	....	3	1	....	....	4	3	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	1	....	....	....	....	....	....	....	....	....	....	2	2	1	1
2	....	....	....	1	2	....	....	....	....	....	....	3	5	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
6	8	....	....	6	6	1	....	8	4	1	....	43	52	5	6

DIPHTHERIA.

Table No. 2—*Showing Deaths by Age,*

Ages.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F	M.	F.	M.	F
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos	....	....	....	....	....	2	....	....
Bet. 1 and 2 yrs	....	1	....	1	....	1	....	....
Bet. 2 and 3 yrs	....	....	....	....	1	....	....	....
Bet. 3 and 4 yrs	....	2	....	1	....	....	....	....
Bet. 4 and 5 yrs	1	....	....	....	....	....	....	....
Bet. 5 and 9 yrs	1	1	....	....	....	....	....	....
Bet. 10 and 14 yrs	....	....	....	....	....	2	....	....
Bet. 15 and 19 yrs	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	2	4	....	2	1	5	....	....

DIPHTHERIA.

Months, Color and Sex, Year 1906.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
2	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
....	....	....	....	1	1	....	....	1	....	....	....	....	....	....	....
3	....	....	....	1	1	....	....	2	....	....	....	....	1	....	....
....	....	....	....	....	1	....	....	1	1	....	....	....	1	....	....
1	....	....	....	....	2	....	1	....	....	....	....	....	....	....	....
....	....	....	....	1	1	....	....	1	2	....	....	1	....	....	1
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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7	....	....	....	3	7	1	1	5	4	....	....	1	2	....	2

Continued on next page.

DIPHTHERIA.

TABLE No. 2 (Continued)—*Showing Deaths*

Ages.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos.	....	....	....	....	....	....	....	....	....	1	....	....
Bet. 1 and 2 yrs.	....	....	....	....	....	....	....	....	1	1	....	....
Bet. 2 and 3 yrs.	1	1	....	....	....	1	....	....	....	....	....	....
Bet. 3 and 4 yrs.	....	1	....	....	1	....	....	....	....	2	....	....
Bet. 4 and 5 yrs.	1	....	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs.	....	1	1	....	....	....	1	1	....	3	....	....
Bet. 10 and 14 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs.	....	....	....	....	....	....	....	....	....	1	....	....
Bet. 35 and 39 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Total	2	3	1	....	1	1	1	1	1	8	....	....

DIPHTHERIA.

by Age, Months, Color and Sex, Year 1906.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	2	....	....
1	1	....	....	1	....	....	....	....	....	....	....	4	4	1	....
....	....	....	....	....	....	....	....	1	2	....	....	4	6	....	1
....	1	....	....	....	....	1	....	4	....	....	....	12	5	1	....
1	1	....	....	1	1	....	....	1	1	....	....	5	11	....	1
1	....	....	....	....	1	....	....	2	1	....	....	6	4	....	1
2	3	....	....	4	3	....	....	....	....	1	....	10	14	3	2
....	1	....	....	....	1	....	....	....	....	....	....	....	5	....	1
1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
6	8	....	....	6	6	1	....	8	4	1	....	43	52	5	6

WHOOPING COUGH.

TABLE NO. 1—*Showing Deaths by Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	1	....
Twelfth	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	...	....
Twenty-first	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	1
Twenty-third	....	....	....	....	....	....	....	...
Twenty-fourth	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	....	....	....	....	....	....	1	1

WHOOPING COUGH.

Months, Color and Sex, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	2	....	....	1	....	....	....	2	....	....	....	....	3	....	1

Continued on next page

WHOOPING COUGH.

Table No. 1 (Continued)—*Showing Deaths*

Wards.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	1	....	....	....	....	....	....	....	1	....	....	....
Second	....	....	....	....	....	....	....	....	1	....	....	....
Third	....	....	....	....	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....	....	....	....	....
Eighth	1	....	....	....	....	1	....	....	....	....	....	....
Ninth	....	1	....	....	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....	1	....	....	....
Fourteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	2	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	1	....	....	....	....
Seventeenth	....	....	....	....	....	....	1	....	....	....	1	....
Eighteenth	....	....	....	1	....	....	1	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....	....	....	1	....
Twentieth	....	2	....	....	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-second	....	....	1	....	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	1	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	2	3	1	1	....	4	2	1	3	....	2	....

WHOOPING COUGH.

by Wards, Months, Color and Sex, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	1	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	1	....	1	1	1	....
....	....	....	....	....	1	....	....	....	....	....	....	....	2	....	....
....	....	....	....	1	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	....	....	....	....	....	....	1	2	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	1	....	....	....	....	....	....	....	1	1	....	3	2	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....
....	....	....	....	....	....	....	....	....	....	....	....	2	....	1	2
1	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	1	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	3	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	1	....	3	1	....	....	....	....	2	2	12	13	9	6

WHOOPING COUGH.

TABLE NO. 2—*Showing Deaths by Ages,*

AGES.	January.				February.			
	White.		Colored.		White.		Colored	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	...	....	....	1	....
Bet. 3 and 12 mos	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs	....	....	....	....	....	....	....	....
Bet. 2 and 3 yrs	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs	....	....	....	....	....	....	....	1
Bet. 10 and 14 yrs	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	...	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	....	....	....	....	....	....	1	1

WHOOPING COUGH.

Months, Color and Sex, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	..
....	1	....	....	....	....	....	....	1	....	....	....	....	1	....	....
....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	...	....	....	....	....	....	....	....	....	....	....	....	....
....	2	....	....	1	....	....	....	2	....	....	....	....	3	....	1

Continued on next page.

WHOOPING COUGH.

Table No. 2 (Continued)—*Showing Deaths*

Ages.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month....	1	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos..	....	....	1	....	....	2	....	....	....	....	....	....
Bet. 3 and 12 mos..	1	3	....	....	....	1	1	1	3	....	1	....
Bet. 1 and 2 yrs..	....	....	....	1	....	1	1	....	....	....	1	....
Bet. 2 and 3 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Total........	2	3	1	1	....	4	2	1	3	....	2	....

WHOOPING COUGH.

by Ages, Months, Color and Sex, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	1	....	....	....	....	....	....	....	2	....	....	....
....	....	....	....	....	1	....	....	....	....	....	1	....	3	2	1
....	....	1	....	2	....	....	....	....	....	1	....	7	6	4	1
1	....	....	....	....	....	....	....	....	....	....	1	2	1	2	2
....	....	....	....	....	....	....	....	....	....	1	....	....	2	1	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	1	....	3	1	....	....	....	....	2	2	12	13	9	6

WHOOPING COUGH.

TABLE NO. I—*Showing Deaths by Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	I
Fourth	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	I	....
Eighteenth	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	...
Twenty-first	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	....	....	....	....	....	....	I	I

WHOOPING COUGH.

Months, Color and Sex, Year 1905.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	1	....	1	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	1	1	....	....	1	....	1	....	2	....	3	1	1	1

Continued on next page.

WHOOPING COUGH.

TABLE No. 1 (Continued)—*Showing Deaths*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	....	1
Fifth	....	....	....	....	....	....	....	....	....	....	....	....
Sixth	....	....	1	....	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....	1	....	....	....
Ninth	....	....	....	....	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	....	....	....	1
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....	....	....	....	....
Thirteenth	2	1	....	....	1	....	....	....	....	....	....	....
Fourteenth	....	....	1	....	....	....	....	....	....	....	....	....
Fifteenth	....	1	....	....	....	1	1	1	....	....	2	....
Sixteenth	....	....	....	....	....	....	....	....	....	....	2	....
Seventeenth	....	....	....	....	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....	....	1	....	....
Nineteenth	....	1	....	....	....	....	....	....	....	1	....	....
Twentieth	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....	....	1	....	....
Twenty-second	....	....	....	....	....	....	....	1	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	1	1	1	....	....
Twenty-fourth	....	....	....	....	....	....	....	....	1	....	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	2	3	2	....	1	1	1	3	3	4	4	2

WHOOPING COUGH.

by Wards, Months, Color and Sex, Year 1905.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	....	....	....	1	....	....	....	2	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
1	....	....	1	1	....	....	....	....	....	....	....	2	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
....	....	....	....	....	....	....	....	....	....	2	....	....	....	2	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
....	....	....	....	1	....	....	....	....	....	....	....	5	1	....	....
1	1	....	....	....	....	....	1	....	....	....	....	1	2	2	1
....	....	....	....	1	....	1	....	....	....	....	....	1	2	4	1
....	....	....	....	....	....	....	....	....	1	....	....	....	1	2	....
....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	1
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	1	1	....	....	....	1	....	....	1	2	2	....	2
1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	1	....	....	....	1	....	....	....	....	1	1	....	2
....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
....	....	1	1	....	....	....	....	....	....	....	....	2	1	2	3
....	....	....	1	....	1	....	....	1	....	....	....	2	1	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3	2	1	5	5	1	1	2	3	1	2	2	21	13	17	17

WHOOPING COUGH.

TABLE NO. 2—*Showing Deaths by Age,*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month								
Bet. 1 and 3 mos.								
Bet. 3 and 12 mos.							1	
Bet. 1 and 2 yrs.								
Bet. 2 and 3 yrs.								
Bet. 3 and 4 yrs.								1
Bet. 4 and 5 yrs.								
Bet. 5 and 9 yrs.								
Bet. 10 and 14 yrs.								
Bet. 15 and 19 yrs.								
Bet. 20 and 24 yrs.								
Bet. 25 and 29 yrs.								
Bet. 30 and 34 yrs.								
Bet. 35 and 39 yrs.								
Bet. 40 and 44 yrs.								
Bet. 45 and 49 yrs.								
Bet. 50 and 54 yrs.								
Bet. 55 and 59 yrs.								
Bet. 60 and 64 yrs.								
Bet. 65 and 69 yrs.								
Bet. 70 and 74 yrs.								
Bet. 75 and 79 yrs.								
Bet. 80 and 84 yrs.								
Bet. 85 and 89 yrs.								
Bet. 90 and 94 yrs.								
Bet. 95 and 99 yrs.								
Total							1	1

WHOOPING COUGH.

Months, Color and Sex, Year 1905.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	1	1	....	....	1	....	1	....	1	....	2	1	1	....
....	....	....	...	....	....	....	...	....	....	1	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	1	1	....	....	1	....	1	....	2	....	3	1	1	1

Continued on next page.

WHOOPING COUGH.

TABLE No. 2 (Continued)—*Showing Deaths*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month....	....	....	....	....	....	....	....	1	....	....	....	....
Bet. 1 and 3 mos.	....	2	....	....	1	....	....	....	1	....	....	....
Bet. 3 and 12 mos.	1	....	2	....	....	....	....	2	1	1	2	2
Bet. 1 and 2 yrs..	....	....	....	....	....	1	1	....	1	2	1	....
Bet. 2 and 3 yrs..	1	....	....	....	....	....	....	....	....	1	....	....
Bet. 3 and 4 yrs..	....	1	....	....	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs..	....	....	....	....	....	....	....	....	....	....	1	....
Bet. 5 and 9 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Total........	2	3	2	....	1	1	1	3	3	4	4	2

WHOOPING COUGH.

by Age, Months, Color and Sex, Year 1905.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	1	....	....	....	....	....	....	....	1	....	....	1
2	1	....	1	3	....	....	....	2	....	....	....	10	3	....	1
....	....	....	2	....	1	....	1	1	1	1	1	6	4	10	9
....	....	1	....	1	....	....	1	....	....	....	1	2	3	4	2
....	1	....	....	....	....	....	....	....	....	1	....	1	2	1	1
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1	....	....	1	....	....	1	....	....	....	....	....	1	....	2	1
....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1
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3	2	1	5	5	1	1	2	3	1	2	2	21	13	17	17

WHOOPING COUGH.

TABLE NO. 1—*Showing Deaths by Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	1	1	....	....	....	1	....	....
Second	....	....	....	1	1	1	....	1
Third	....	2	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....
Fifth	....	....	....	1	....	....	....	....
Sixth	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....
Ninth	....	1	1	....	....	....	....	....
Tenth	....	....	1	....	....	....	....	....
Eleventh	....	....	....	....	....	....	1	1
Twelfth	....	....	....	1	....	....	....	...
Thirteenth	....	....	....	....	....	....	1	1
Fourteenth	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	....	1	....	....	....	....	....	2
Seventeenth	....	....	....	1	1	....	....	....
Eighteenth	....	....	....	2	....	....	....	....
Nineteenth	....	....	1	2	....	....	1	....
Twentieth	....	....	....	....	....	1	....	....
Twenty-first	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	1	....
Twenty-third	....	1	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	1	3	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	1	6	3	8	3	6	4	5

WHOOPING COUGH.

Months, Color and Sex, Year 1906.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....
....	3	....	....	....	....	....	1	1	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1
....	....	....	....	1	....	....	....	....	1	....	1	....	....	1	....
....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....
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1	....	3	....	....	....	1	....	....	....	2	....	....	....	....	....
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....	....	1	....	1	1	....	....	....	....	....	....	....	....	1	....
....	....	2	2	1	....	....	2	....	....	....	....	....	....	....	....
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1	....	....	....	2	....	1	....	....	....	....	....	....	....	....	....
1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
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3	6	7	4	7	4	2	4	5	3	3	3	1	1	2	2

Continued on next page.

WHOOPING COUGH.

TABLE No. 1 (Continued)—*Showing Deaths*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....	....	....	....	....
Third	....	1	....	....	....	1	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	1	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....	....	....	1	....
Sixth	....	....	....	....	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....	....	....	....	....
Tenth	1	....	....	....	....	1	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....	....	....	....	1
Twelfth	....	....	....	1	....	....	....	....	....	....	....	....
Thirteenth	....	1	....	....	....	....	....	....	....	....	....	....
Fourteenth	....	....	1	....	....	....	....	....	....	....	1	....
Fifteenth	....	1	....	....	....	1	....	....	....	....	....	....
Sixteenth	1	....	1	....	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....	....	....	....	....
Eighteenth	....	1	....	1	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....	....	....	....	....
Twentieth	....	....	....	1	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....	....	1	....	....
Twenty-fourth	....	....	....	....	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	2	4	2	3	....	3	1	....	....	1	2	1

WHOOPING COUGH.

by Wards, Months, Color and Sex, Year 1906.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	1	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	2	....	2
....	1	....	....	....	1	....	....	....	....	....	....	2	9	....	1
....	....	2	9	....	....	2	3	....	....	....	....	1	....	5	13
....	....	....	....	....	....	....	....	....	....	....	....	1	1	2	2
....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1
....	....	....	....	....	1	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	1	....
....	....	....	....	....	....	1	....	....	....	....	....	....	....	2	3
....	....	....	....	....	....	....	....	....	....	....	....	1	....	6	2
1	....	....	....	....	....	....	....	....	....	....	....	1	1	1	1
....	....	....	....	....	....	....	....	....	....	....	....	1	1	2	2
....	....	....	....	....	....	....	....	....	....	....	....	1	3	....	1
....	....	....	....	....	....	....	....	....	....	....	....	2	2	3	2
....	....	....	....	....	....	....	....	....	....	1	....	2	....	3	5
....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	3
....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	2
....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	3	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....
....	....	....	....	....	....	....	....	....	....	....	....	3	2	1	....
....	....	....	....	....	....	....	....	....	....	....	....	3	3	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	1	2	9	....	2	3	3	....	....	1	....	23	37	32	42

WHOOPING COUGH.

TABLE NO. 2—*Showing Deaths by Age,*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	1	....	....	2	1	1	....
Bet. 3 and 12 mos	1	1	....	2	1	1	2	....
Bet. 1 and 2 yrs	....	3	3	2	....	3	1	1
Bet. 2 and 3 yrs	....	....	....	3	....	....	....	3
Bet. 3 and 4 yrs	....	1	....	....	....	....	....	....
Bet. 4 and 5 yrs	....	....	....	1	....	1	....	....
Bet. 5 and 9 yrs	....	....	....	....	....	....	....	1
Bet. 10 and 14 yrs	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	1	6	3	8	3	6	4	5

WHOOPING COUGH.

Months, Color and Sex, Year 1906.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	I	....	....	....	I	....	....	....	....	....	....
....	3	2	I	3	....	....	2	....	....	....	....	....	....	....	....
2	2	2	I	3	I	I	I	3	....	3	....	....	I	I	I
....	I	2	....	....	I	I	....	2	2	....	2	I	....	I	I
I	....	....	....	....	I	....	I	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3	6	7	4	7	4	2	4	5	3	3	3	I	I	2	2

Continued on next page.

WHOOPING COUGH.

TABLE NO. 2 (Continued)—*Showing Deaths*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	1	....	1	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos.	....	....	....	....	....	....	....	....	....	1	....	....
Bet. 3 and 12 mos.	1	1	....	....	....	2	1	....	....	....	2	....
Bet. 1 and 2 yrs.	....	....	2	....	....	....	....	....	....	....	....	1
Bet. 2 and 3 yrs.	1	1	....	....	....	1	....	....	....	....	....	....
Bet. 3 and 4 yrs.	....	1	....	2	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Total	2	4	2	3	....	3	1	....	....	1	2	1

WHOOPING COUGH.

by Age, Months, Color and Sex, Year 1906.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	1	....	....	....	....	....	....	....	....	....	3	....	2
....	....	....	....	....	....	1	....	....	....	....	....	5	6	4	3
....	1	1	....	....	1	....	....	....	....	....	....	11	11	13	5
....	....	....	1	....	1	1	1	....	....	....	....	3	11	11	9
1	....	....	....	....	....	....	....	....	....	1	....	3	3	1	7
....	....	1	3	....	....	1	....	....	....	....	....	1	2	3	5
....	....	....	2	....	....	....	2	....	....	....	....	....	1	....	6
....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	5
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	1	2	9	....	2	3	3	....	....	1	....	23	37	32	42

WHOOPING COUGH.

TABLE NO. 1—*Showing Deaths by Wards,*

Wards.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....
Seventeenth	....	....	1	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	....	....	1	....	....	....	....	....

WHOOPING COUGH.

Months, Color and Sex, Year 1907.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
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1	....	...	....	....	....	....	....	1	1	1	....	....	1	....	....

Continued on next page.

WHOOPING COUGH.

TABLE NO. 1 (Continued)—*Showing Deaths*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	1	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	1	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....	....	....	....	....
Eighth	....	1	....	....	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	1	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fifteenth	....	....	1	....	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	1	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	....	1	1	....	1	2	1	....	....	....	....	....

WHOOPING COUGH.

by Wards, Months, Color and Sex, Year 1907.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
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2	....	....	....	....	....	....	....	....	2	1	....	5	7	5	....

WHOOPING COUGH.

TABLE NO. 2—*Showing Deaths by Age,*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs	....	....	1	....	....	....	....	....
Bet. 2 and 3 yrs	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	....	....	1	....	....	....	....	....

WHOOPING COUGH.

Months, Color and Sex, Year 1907.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
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1	....	....	....	1	1	1	....	....	....	....	....	....	1	....	....

Continued on next page.

WHOOPING COUGH.

TABLE No. 2 (Continued)—*Showing Deaths*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos.		1	....	....	....	1	....	....	....	....	....	....
Bet. 1 and 2 yrs.	....	....	1	....	1	....	....	....	....	....	....	....
Bet. 2 and 3 yrs.	....	....	....	....	....	1	....	....	....	....	....	....
Bet. 3 and 4 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs.	....	....	....	....	....	....	1	....	....	....	....	....
Bet. 10 and 14 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Total		1	1	....	1	2	1	....	....	....	....	....

WHOOPING COUGH.

by Age, Months, Color and Sex; Year 1907.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
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1	....	....	....	....	....	....	....	....	....	....	....	3	1	2	....
1	....	....	....	....	....	....	....	....	1	....	....	1	2	....	....
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2	....	....	....	....	....	....	....	....	2	1	....	5	7	5	....

WHOOPING COUGH.

TABLE NO. 1—*Showing Deaths by Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	1	....	....
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....
Nineteenth	....	1	....	....	....	1	....	....
Twentieth	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....
Twenty-second	....	....	1	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	1	....	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	....	1	1	....	1	2	....	....

WHOOPING COUGH.

Months, Color and Sex, Year 1908.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
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....	1	....	2	1	1	....	....	....	1	....	....	2	1	....	1

Continued on next page.

WHOOPING COUGH.

TABLE NO. 1 (Continued)—*Showing Deaths*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....	....	....	....	....
Second	....	1	....	....	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....	....	....	....	....
Sixth	1	....	....	....	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....	....	....	....	....
Eighth	1	....	....	....	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....	....	....	....	....
Thirteenth	....	1	....	....	1	1	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....	....	....	....	....
Sixteenth	....	1	....	1	....	....	1	....	....	....	1	1
Seventeenth	....	....	....	....	....	....	....	....	....	....	....	....
Eighteenth	1	....	....	....	....	....	....	....	....	....	....	....
Nineteenth	1	1	....	....	....	....	2	....	1	....	....	....
Twentieth	1	....	....	....	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	1	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....	....	1	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	5	4	....	1	1	1	4	....	1	1	1	1

WHOOPING COUGH.

by Wards, Months, Color and Sex, Year 1908.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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1	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	1	....	....	....	....	....	....	....	....	....	1	2	3
....	....	....	1	....	....	....	....	....	....	....	1	....	....	....	3
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....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
....	....	....	....	....	1	....	....	....	....	....	....	2	3	....	....
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1	1	....	2	....	1	....	....	....	....	....	1	12	15	6	8

WHOOPING COUGH.

TABLE No. 2—*Showing Deaths by Age,*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos	....	....	....	....	1	1	....	....
Bet. 1 and 2 yrs	....	1	1	....	....	1	....	....
Bet. 2 and 3 yrs	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	..	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	...	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	....	1	1	....	1	2	....	....

WHOOPING COUGH.

Months, Color and Sex, Year 1908.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	1	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	....	....	1	1	1	....	....	....	....	....	....	1	....	....	1
....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	2	1	1	....	....	....	1	....	....	2	1	....	1

Continued on next page.

WHOOPING COUGH.

TABLE NO. 2 (Continued)—*Showing Deaths*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos.	1	....	....	....	....	....	....	....	1	....	....	....
Bet. 3 and 12 mos.	4	2	....	1	1	1	2	....	....	....	1	....
Bet. 1 and 2 yrs.	....	1	....	....	....	....	1	....	....	1	....	1
Bet. 2 and 3 yrs.	....	1	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs.	....	....	....	....	....	....	1	....	....	....	....	....
Bet. 4 and 5 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Total	5	4	....	1	1	1	4	....	1	1	1	1

WHOOPING COUGH.

by Age, Months, Color and Sex, Year 1908.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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1	....	....	2	....	....	....	....	....	....	....	....	3	5	2	5
....	....	....	....	....	....	....	....	....	....	....	1	....	1	....	2
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	1	....	2	....	1	....	....	....	....	....	1	12	15	6	8

WHOOPING COUGH.

TABLE NO. 1—*Showing Deaths by Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First								
Second								
Third								
Fourth								
Fifth								
Sixth								
Seventh								
Eighth								
Ninth								
Tenth								
Eleventh								
Twelfth								
Thirteenth								
Fourteenth								
Fifteenth								
Sixteenth								
Seventeenth								
Eighteenth								
Nineteenth								
Twentieth								
Twenty-first								
Twenty-second								
Twenty third								
Twenty fourth						1		
Bay View								
Sydenham								
Total						1		

WHOOPING COUGH.

Months, Color and Sex, Year 1909.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	....	1	....
....	....	....	....	....	....	....	....	....	....	1	1	....	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	2	1	....	....	1	....	....	....	1	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	1	....	....	....	....	....	....	....	....
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....	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	....	2	....	1	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	1	3	2	2	1	3	....	4	1	4	3	2	1

Continued on next page.

WHOOPING COUGH.

TABLE No. 1 (Continued)—*Showing Deaths*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	1	....	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....	....	....	....	....
Third	1	....	1	....	....	....	....	....	....	1	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	1	....
Fifth	....	....	....	....	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....	....	....	....	....
Seventh	1	1	....	....	....	....	....	1	....	....	....	....
Eighth	....	1	....	....	....	....	....	....	1	....	1	....
Ninth	1	1	....	1	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	....	1	....	....
Eleventh	....	....	....	....	....	....	....	1	....	....	....	1
Twelfth	....	....	....	1	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	1	1	....	....	....	....	....	....
Fourteenth	1	....	....	2	....	....	....	....	....	....	1	....
Fifteenth	....	....	1	1	....	1	1	1	1	1	....	2
Sixteenth	....	....	1	....	....	1	....	1	....	....	....	....
Seventeenth	....	....	1	....	....	....	....	1	....	....	2	3
Eighteenth	....	....	....	....	....	....	....	....	....	....	....	....
Nineteenth	....	1	....	....	....	....	....	1	2	1	1	....
Twentieth	....	....	....	1	2	1	1	....	....	1	....	....
Twenty-first	1	1	....	....	....	1	....	....	....	....	....	....
Twenty-second	1	1	....	....	....	....	....	....	....	....	....	....
Twenty-third	....	1	....	....	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	1	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	6	7	5	6	4	5	2	6	4	5	6	6

WHOOPING COUGH.

by Wards, Months, Color and Sex, Year 1909.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	2	1	1	....
1	....	....	....	....	....	....	....	....	....	....	1	3	....	2	1
....	....	....	....	....	....	....	1	....	....	1	....	....	....	3	2
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	1	....	1
1	1	....	....	....	....	....	....	....	....	....	....	6	4	1	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2
....	....	....	....	....	....	....	1	....	1	....	....	....	1	....	2
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	....	1	....	....	1	....	....	....	....	....	1	1	1	3	4
....	....	....	1	....	....	....	1	....	....	....	....	3	2	4	6
....	....	1	....	1	....	....	2	....	....	1	....	1	1	3	3
....	....	1	....	....	....	1	....	....	....	1	1	....	....	6	5
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	1	....	....	....	....	....	....	2	3	1	1
....	2	....	....	1	....	1	....	....	....	....	....	3	5	2	1
....	....	....	....	....	....	....	....	....	....	....	....	1	2	....	1
....	....	....	....	....	1	....	....	....	....	....	....	2	2	2	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2	3	3	1	2	3	2	5	....	1	3	3	29	30	29	31

WHOOPING COUGH.

Table No. 2—*Showing Deaths by Age.*

Ages.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	1	....	....
Bet. 3 and 12 mos	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs	....	....	....	....	....	....	....	....
Bet. 2 and 3 yrs	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	....	....	....	....	....	1	....	....

WHOOPING COUGH.

Months, Color and Sex, Year 1909.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....
....	....	....	....	....	....	1	....	....	....	1	....	1	1	1	....
....	....	....	....	1	....	1	....	1	....	3	1	2	....	1	....
....	....	....	....	1	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	1	....	....	....	1	....	....	....	1	1	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....
....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	1	3	2	2	1	3	....	4	1	4	3	2	1

Continued on next page

WHOOPING COUGH.

TABLE No. 2 (Continued)—*Showing Deaths*

Ages.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	1					1						
Bet. 1 and 3 mos.	1	3	2	1	3					1	1	1
Bet. 3 and 12 mos.	4	3				2	1	3	1	2	3	2
Bet. 1 and 2 yrs.		1	2	2	1	2	1	3	1	1	2	2
Bet. 2 and 3 yrs.				3					2			1
Bet. 3 and 4 yrs.										1		
Bet. 4 and 5 yrs.												
Bet. 5 and 9 yrs.			1									
Bet. 10 and 14 yrs.												
Bet. 15 and 19 yrs.												
Bet. 20 and 24 yrs.												
Bet. 25 and 29 yrs.												
Bet. 30 and 34 yrs.												
Bet. 35 and 39 yrs.												
Bet. 40 and 44 yrs.												
Bet. 45 and 49 yrs.												
Bet. 50 and 54 yrs.												
Bet. 55 and 59 yrs.												
Bet. 60 and 64 yrs.												
Bet. 65 and 69 yrs.												
Bet. 70 and 74 yrs.												
Bet. 75 and 79 yrs.												
Bet. 80 and 84 yrs.												
Bet. 85 and 89 yrs.												
Bet. 90 and 94 yrs.												
Bet. 95 and 99 yrs.												
Total	6	7	5	6	4	5	2	6	4	5	6	6

WHOOPING COUGH.

by Age, Months, Color and Sex, Year 1909.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	1	....	....	....	....	....	....	2	2	....	1
....	....	....	....	....	2	....	1	....	....	1	....	5	8	7	3
1	1	2	....	1	....	1	3	....	1	2	2	11	9	14	11
2	1	1	....	1	....	....	1	....	....	....	....	6	6	6	8
....	1	....	....	....	....	1	....	....	....	....	1	5	2	1	6
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
....	....	....	1	....	....	....	....	....	....	....	....	....	2	1	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3	3	3	1	2	3	2	5	....	1	3	3	29	30	29	31

WHOOPING COUGH.

TABLE NO. 1—*Showing Deaths by Wards.*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....
Third	....	1	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	1	....	....	....
Sixth	....	....	....	....	....	....	1	....
Seventh	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	1
Ninth	....	....	....	....	....	1	....	....
Tenth	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	1
Thirteenth	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	1	....	....
Sixteenth	1	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	2	1
Eighteenth	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....
Twentieth	....	1	....	....	....	1	....	....
Twenty-first	....	....	....	1	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	1
Twenty-fourth	....	....	....	....	....	1	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	1	2	....	1	1	4	3	4

WHOOPING COUGH.

Months, Color and Sex, Year 1910.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	....	2	....	....	....	....	....	....	....	....	....	....
....	1	....	....	....	....	....	....	1	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	4	4
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1
....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	....
....	....	....	....	....	3	....	....	....	....	....	1	....	....	....	....
1	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	1	....	....	....	2	....	....	....	....	....	....	....	....	1
....	1	....	....	....	1	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....
....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....
....	....	1	....	....	....	1	1	....	....	1	....	....	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
4	3	3	....	1	6	3	1	3	3	1	2	2	3	5	6

Continued on next page.

WHOOPING COUGH.

TABLE No. 1 (Continued)—*Showing Deaths*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....	....	....	....	....
Third	1	....	....	....	....	....	....	....	....	....	....	....
Fourth	....	....	1	1	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....	....	....	....	....
Seventh	....	....	....	1	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	1	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....
Twelfth	1	....	....	....	....	....	....	....	....	....	....	....
Thirteenth	....	1	....	....	....	....	....	....	....	1	....	....
Fourteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fifteenth	....	1	....	....	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	1	1	....	....	....	....
Twentieth	....	....	....	....	1	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-third	....	1	....	....	....	....	....	....	2	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....	1	....	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	2	3	1	2	2	....	1	1	3	1	....	....

WHOOPING COUGH.

by Wards, Months, Color and Sex, Year 1910.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	3	....	....
1	1	....	....	....	....	....	....	....	....	....	....	3	4	....	....
....	....	1	....	....	....	....	....	....	....	....	....	....	....	6	5
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	1	....	....	....	....	....	....	....	1	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	2
....	....	....	....	....	....	....	....	....	....	....	....	1	2	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	4	....	1
....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	....	3	2
....	....	....	....	....	....	....	....	....	....	....	....	1	4	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	2	2	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1
....	....	1	....	....	....	....	....	....	....	....	....	....	....	6	2
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
....	....	....	....	....	....	....	....	....	....	....	....	2	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	1
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	3	1	....	1
....	....	....	....	....	....	....	....	....	....	....	....	2	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	1	2	....	1	....	....	....	....	....	....	....	20	26	19	17

WHOOPING COUGH.

TABLE NO. 2—*Showing Deaths by Age,*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	1	2	....	....
Bet. 3 and 12 mos	1	....	....	....	....	....	2	2
Bet. 1 and 2 yrs	....	2	....	....	....	1	....	....
Bet. 2 and 3 yrs	....	....	....	1	....	1	1	1
Bet. 3 and 4 yrs	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs	....	....	....	....	....	....	....	1
Bet. 5 and 9 yrs	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	1	2	....	1	1	4	3	4

WHOOPING COUGH.

Months, Color and Sex, Year 1910.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	1	1	....	1	....	....	1
3	....	1	....	1	2	1	1	2	1	....	1	1	1	1	....
....	2	1	....	....	1	1	....	....	1	....	1	....	1	....	1
....	1	....	....	....	1	....	....	....	....	....	....	....	1	1	3
....	....	....	....	....	....	1	....	1	....	....	....	....	....	1	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	2	1
....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
4	3	3	....	1	6	3	1	3	3	1	2	2	3	5	6

Continued on next page.

WHOOPING COUGH.

TABLE No. 2 (Continued)—*Showing Deaths*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month....	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos.	1	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos.	1	2	....	....	1	....	1	....	3	1	....	....
Bet. 1 and 2 yrs..	....	....	1	....	1	....	....	....	....	....	....	....
Bet. 2 and 3 yrs..	....	....	....	2	....	....	....	1	....	....	....	....
Bet. 3 and 4 yrs..	....	1	....	....	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Total........	2	3	1	2	2	....	1	1	3	1	....	....

WHOOPING COUGH.

by Age, Months, Color and Sex, Year 1910.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	3	4	1	1
1	1	1	....	1	....	....	....	....	....	....	....	15	8	7	4
....	....	1	....	....	....	....	....	....	....	....	....	1	8	4	2
....	....	....	....	....	....	....	....	....	....	....	....	....	4	2	8
....	....	....	....	....	....	....	....	....	....	....	....	1	1	2	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
....	....	....	....	....	....	....	....	....	....	....	....	1	....	2	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	1	2	....	1	....	....	....	....	....	....	....	21	26	19	17

WHOOPING COUGH.

TABLE NO. I—*Showing Deaths by Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	1	....	....	....
Tenth	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	1
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	1
Seventeenth	....	....	....	....	....	....	....	....
Eighteenth	....	1	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	1	....	....
Twenty-first	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	....	1	....	....	1	1	....	2

WHOOPING COUGH.

Months, Color and Sex, Year 1911.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	....	1	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....
....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	....	1	....	....	1	....	....	....	....	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
....	....	....	....	....	....	....	....	....	1	1	1	....	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	2	....	....	1	2	2	....	2	2	2	2	....	2	....	3

Continued on next page.

WHOOPING COUGH.

TABLE No. 1 (Continued)—*Showing Deaths*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	1	....	....	....	....	1
Fourth	....	....	....	....	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fourteenth	1	....	....	....	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....	1	1	....	....
Sixteenth	....	....	1	....	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	1	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....	....	....	1	....
Twenty-second	....	....	....	1	....	....	....	....	....	....	....	....
Twenty-third	1	....	....	....	....	....	....	1	....	....	....	....
Twenty-fourth	....	1	....	....	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	2	1	1	1	....	....	1	2	1	1	1	1

WHOOPING COUGH.

by Wards, Months, Color and Sex, Year 1911.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	2	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	1	1	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	....
....	....	....	....	1	....	....	....	....	....	....	....	3	....	1	1
....	....	....	....	....	1	....	....	....	....	....	....	1	2	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	1
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	2
....	....	....	....	....	....	....	1	....	....	....	....	....	2	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	3	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2
....	....	....	....	....	....	....	....	....	....	....	....	1	1	1	2
....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	1	....	....	1	1	....	1	....	3	....	....	9	17	7	12

WHOOPING COUGH.

TABLE NO. 2—*Showing Deaths by Age,*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs	....	1	....	....	1	1	....	2
Bet. 2 and 3 yrs	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	....	1	....	....	1	1	....	2

WHOOPING COUGH.

Months, Color and Sex, Year 1911.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	1	....	....	....	2	....	1	....	....	....	....
....	1	....	....	....	....	1	....	1	....	1	....	....	2	....	....
....	1	....	....	1	1	....	....	1	....	....	....	....	....	....	1
....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	2
....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	2	....	....	1	2	2	....	2	2	2	2	....	2	....	3

Continued on next page.

WHOOPING COUGH.

TABLE No. 2 (Continued)—*Showing Deaths*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month										1		
Bet. 1 and 3 mos.								1				
Bet. 3 and 12 mos.		1						1	1		1	1
Bet. 1 and 2 yrs.			1				1					
Bet. 2 and 3 yrs.	2			1								
Bet. 3 and 4 yrs.												
Bet. 4 and 5 yrs.												
Bet. 5 and 9 yrs.												
Bet. 10 and 14 yrs.												
Bet. 15 and 19 yrs.												
Bet. 20 and 24 yrs.												
Bet. 25 and 29 yrs.												
Bet. 30 and 34 yrs.												
Bet. 35 and 39 yrs.												
Bet. 40 and 44 yrs.												
Bet. 45 and 49 yrs.												
Bet. 50 and 54 yrs.												
Bet. 55 and 59 yrs.												
Bet. 60 and 64 yrs.												
Bet. 65 and 69 yrs.												
Bet. 70 and 74 yrs.												
Bet. 75 and 79 yrs.												
Bet. 80 and 84 yrs.												
Bet. 85 and 89 yrs.												
Bet. 90 and 94 yrs.												
Bet. 95 and 99 yrs.												
Total	2	1	1	1	....	....	1	2	1	1	1	1

WHOOPING COUGH.

by Age, Months, Color and Sex, Year 1911.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	4	....	2
1	....	....	....	....	1	....	....	....	1	....	....	3	6	3	2
....	1	....	....	1	....	....	1	....	....	....	....	4	5	2	4
....	....	....	....	....	....	....	....	....	1	....	....	2	1	1	4
....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	1	....	...	1	1	....	1	...	3	....	....	9	17	7	12

MEASLES.

TABLE No. 1—*Showing Deaths by Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....
Third	....	1	....	....	....	1	....	....
Fourth	....	....	....	....	1	....	7	....
Fifth	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	1
Twelfth	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....
Twenty first	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....
Twenty fourth	....	1	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	....	2	....	....	1	1	7	1

MEASLES.

Months, Color and Sex, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
2	....	....	....	2	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	2	....	....	....	1	....	....	1	....	....	....	....	....	....
....	....	1	....	1	....	....	....	1	....	....	1	....	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	....	....	....	2	2	....	....	2	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	1	....	....	....	....	....	1	2	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
....	....	....	....	3	....	....	1	3	2	....	....	....	....	....	....
2	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	1	....	....	....	....	....	....	1	1	....	....	....	....	....
....	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	2	1	....	....	1	....	1	....	....	....	....	1	....	....	....
....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
1	1	....	....	6	2	....	....	3	6	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
8	6	7	....	15	....	2	2	11	11	3	3	5	2	1	....

Continued on next page.

MEASLES.

TABLE NO. I (Continued)—*Showing Deaths*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....	....	....	....	....
Third	....	....	....	....	1	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....	....	1	....	....
Sixth	....	....	....	....	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	1	....	....	1	....	....	....	....
Eighth	....	....	....	1	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....	....	....	....	....
Nineteenth	....	1	....	....	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-fourth	....	1	....	....	....	1	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	....	2	....	1	2	1	....	1	....	1	....	....

MEASLES.

by Wards, Months, Color and Sex, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	5	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	1	....	....	....	4	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	10	....
....	....	....	....	....	....	....	....	....	....	....	....	2	1	1	1
....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	1
....	....	....	....	....	....	....	....	....	....	....	....	5	2	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	2
....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	6	2	....	1
....	....	....	....	....	....	....	....	....	....	....	....	2	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	2	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	4	1	1
....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....
....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	1	....	....	....	....	....	....	7	2	....	....	18	15	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	1	....	....	....	....	8	2	....	....	50	36	20	9

MEASLES.

TABLE No. 2—*Showing Deaths by Age,*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	1	....	....	....
Bet. 1 and 3 mos	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos	....	....	....	....	....	1	1	....
Bet. 1 and 2 yrs	..	2	....	....	....	....	2	....
Bet. 2 and 3 yrs	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs	....	....	....	....	....	....	2	....
Bet. 4 and 5 yrs	....	....	....	....	....	....	2	....
Bet. 5 and 9 yrs	....	....	....	....	....	....	....	1
Bet. 10 and 14 yrs	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs	....	....	....	....	....	....	....	....
Total	....	2	....	....	1	1	7	1

MEASLES.

Months, Color and Sex, Year 1913.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	I	....	....	....	....	....	....	....	....
....	....	....	....	I	....	....	....	....	....	....	....	....	....	....	....
4	2	3	....	7	I	....	....	6	4	....	....	I	I	....	....
2	2	2	....	3	2	I	....	3	5	3	3	....	....	....	....
....	I	....	....	....	I	I	I	2	....	....	....	3	....	....	....
I	....	I	....	2	3	....	....	....	I	....	....	....	I	....	....
....	....	I	....	....	....	....	....	....	....	....	....	I	....	....	....
I	I	....	....	I	....	....	....	....	I	....	....	....	....	I	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	I	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
8	6	7	....	15	7	2	2	11	11	3	3	5	2	I	....

Continued on next page.

MEASLES.

TABLE NO. 2 (Continued)—*Showing Deaths*

Ages.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month....	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos.	....	1	....	....	1	1	....	....	....	....	....	....
Bet. 1 and 2 yrs..	....	1	....	....	....	....	....	1	....	1	....	....
Bet. 2 and 3 yrs..	....	....	....	1	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs..	....	....	....	....	1	....	....	....	....	....	....	....
Bet. 4 and 5 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Total............		2	....	1	2	1	....	1	....	1	....	....

MEASLES.

by Age, Months, Color and Sex, Year 1913.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	1	....	....	....	....	....	....	5	....	....	....	24	12	4	....
....	....	....	1	....	....	....	....	2	2	....	....	10	15	8	5
....	....	....	....	....	....	....	....	1	....	....	....	6	2	1	2
....	....	....	....	....	....	....	....	....	....	....	....	4	5	3	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	3	....
....	....	....	....	....	....	....	....	....	....	....	....	2	2	1	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	1	....	....	....	....	8	2	....	....	50	36	20	9

MEASLES.

TABLE NO. 1—*Showing Deaths by Wards.*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	1
Fourth	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	....	....	....	....	....	....	....	1

MEASLES.

Months, Color and Sex, Year 1905.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
1	1	....	....	....	1	....	....	....	....	....	....	1	1	....	....
....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
....	....	1	....	....	....	....	....	....	1	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
...	....	....	....	1	....	....	1	....	....	....	....	1	1	....	....
....	....	....	....	1	1	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....
....	....	....	....	1	....	....	....	2	1	....	....	4	3	....	2
....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	1	....	....	....	....	1	....	....	....	....	1	....	1	1
....	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	1	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	....	....	....	1	....	1	1
1	....	....	....	1	1	....	....	....	2	....	....	....	1	....	....
....	....	....	....	1	....	....	....	1	1	....	....	1	1	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3	1	2	....	6	3	1	2	8	6	....	2	13	9	2	4

Continued on next page.

MEASLES.

TABLE No. I (Continued)—*Showing Deaths*

WARDS.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....	....	....	....	1
Sixth	....	....	....	....	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	1	....	....	....	....	....
Eighteenth	....	....	....	....	1	1	....	....	1	4	....	....
Nineteenth	....	....	....	....	....	....	....	....	....	....	....	....
Twentieth	....	1	....	....	....	....	....	....	....	....	....	....
Twenty-first	....	1	....	....	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-third	....	....	1	....	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....	...	1	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	...	2	1	....	1	1	1	....	1	5	....	1

MEASLES.

by Wards, Months, Color and Sex, Year 1905.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	1	....	....	....	....	....	....	....	....	....	....	1	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	3	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	1	1	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	1	....	....	....	....	....	....	....	....	....	....	2	2	....	1
....	....	....	....	....	....	....	....	....	....	....	....	1	2	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	7	4	....	2
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	3	2
....	....	....	....	....	....	....	....	....	....	....	....	4	5	....	....
....	....	....	....	....	....	....	....	....	....	1	....	1	1	1	....
....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
....	....	....	....	....	1	....	....	1	2	....	....	1	4	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	....	1	1
....	....	....	....	....	....	....	....	....	....	....	....	2	4	1	....
....	....	....	....	....	....	....	....	....	....	....	....	3	3	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	2	....	1	....	1	....	....	1	2	1	....	33	32	8	11

MEASLES.

TABLE NO. 2—*Showing Deaths by Age,*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos.	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos.	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs.	....	....	....	....	....	....	....	....
Bet. 2 and 3 yrs.	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs.	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs.	....	....	....	....	....	....	....	1
Bet. 5 and 9 yrs.	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs.	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs.	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs.	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs.	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs.	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs.	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs.	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs.	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs.	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs.	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs.	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs.	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs.	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs.	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs.	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs.	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs.	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs.	....	....	....	....	....	....	....	....
Total	....	....	....	....	....	....	....	1

MEASLES.

Months, Color and Sex, Year 1905.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
....	....	1	....	3	1	....	1	1	....	....	1	2	2	1	2
....	....	1	....	....	2	....	....	3	5	....	....	7	5	....	2
1	....	....	....	1	....	1	....	2	1	....	....	3	2	1	....
....	1	....	....	1	....	....	1	1	....	....	....	....	....	....	....
1	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
1	....	....	....	1	....	....	....	....	....	....	1	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3	1	2	....	6	3	1	2	8	6	....	2	13	9	2	4

Continued on next page.

MEASLES.

TABLE NO. 2 (Continued)—*Showing Deaths*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos.	....	1	....	....	....	....	....	....	....	1	....	....
Bet. 1 and 2 yrs.	....	1	1	....	1	1	....	....	1	1	....	....
Bet. 2 and 3 yrs.	....	....	....	....	....	....	....	....	....	3	....	....
Bet. 3 and 4 yrs.	....	....	....	....	....	....	....	....	....	....	....	1
Bet. 4 and 5 yrs.	....	....	....	....	....	....	1	....	....	....	....	....
Bet. 5 and 9 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 10 and 14 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs.	....	....	....	....	....	....	....	....	....	....	....	....
Total	....	2	1	....	1	1	1	....	1	5	....	1

MEASLES.

by Age, Months, Color and Sex, Year 1905.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
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....	2	....	1	....	1	....	....	1	2	1	....	33	32	8	11

MEASLES.

TABLE No. 1—*Showing Deaths by Wards,*

WARDS.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....
Eighth	....	1	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....
Tenth	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....
Total	....	1	....	....	....	....	....	....

MEASLES.

Months, Color and Sex, Year 1906.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
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1	1	....	....	....	....	....	....	1	2	....	....	1	....	....	....

Continued on next page.

MEASLES.

Table No. 1 (Continued)—*Showing Deaths*

Wards.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
First	....	....	....	....	....	....	....	....	....	....	....	....
Second	....	....	....	....	....	....	....	....	....	....	....	....
Third	....	....	....	....	....	....	....	....	....	....	....	....
Fourth	....	....	....	....	....	....	....	....	....	....	....	....
Fifth	....	....	....	....	....	....	....	....	....	....	....	....
Sixth	....	....	....	....	....	....	....	....	....	....	....	....
Seventh	....	....	....	....	....	....	....	....	....	....	....	....
Eighth	....	....	....	....	....	....	....	....	....	....	....	....
Ninth	....	....	....	....	....	....	....	....	....	....	....	....
Tenth	....	....	1	....	....	....	....	....	....	....	....	....
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....
Twelfth	....	....	....	....	....	1	....	....	....	....	....	....
Thirteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fourteenth	....	....	....	....	....	....	....	....	....	....	....	....
Fifteenth	....	....	....	....	....	....	....	....	....	....	....	....
Sixteenth	....	....	....	....	....	....	....	....	....	....	....	....
Seventeenth	....	....	....	....	....	....	....	....	....	....	....	....
Eighteenth	....	....	....	....	....	....	....	....	....	....	....	....
Nineteenth	....	....	....	....	....	....	....	....	....	....	....	....
Twentieth	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-first	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-second	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-third	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-fourth	....	....	....	....	....	....	....	....	....	....	....	....
Bay View	....	....	....	....	....	....	....	....	....	....	....	....
Sydenham	....	....	....	....	....	....	....	....	....	....	....	....
Total	....	....	1	....	....	1	....	....	....	....	....	....

MEASLES.

by Wards, Months, Color and Sex, Year 1906.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
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....	....	....	1	....	....	....	....	....	....	....	....	3	5	1	1

MEASLES.

TABLE NO. 2—*Showing Deaths by Age,*

AGES.	January.				February.			
	White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month								
Bet. 1 and 3 mos.								
Bet. 3 and 12 mos.								
Bet. 1 and 2 yrs.								
Bet. 2 and 3 yrs.		1						
Bet. 3 and 4 yrs.								
Bet. 4 and 5 yrs.								
Bet. 5 and 9 yrs.								
Bet. 10 and 14 yrs.								
Bet. 15 and 19 yrs.								
Bet. 20 and 24 yrs.								
Bet. 25 and 29 yrs.								
Bet. 30 and 34 yrs.								
Bet. 35 and 39 yrs.								
Bet. 40 and 44 yrs.								
Bet. 45 and 49 yrs.								
Bet. 50 and 54 yrs.								
Bet. 55 and 59 yrs.								
Bet. 60 and 64 yrs.								
Bet. 65 and 69 yrs.								
Bet. 70 and 74 yrs.								
Bet. 75 and 79 yrs.								
Bet. 80 and 84 yrs.								
Bet. 85 and 89 yrs.								
Bet. 90 and 94 yrs.								
Bet. 95 and 99 yrs.								
Total		1						

MEASLES.

Months, Color and Sex, Year 1906.

March.				April.				May.				June.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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1	1	....	....	....	....	....	....	1	2	....	....	1	....	....	....
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1	1	....	....	....	....	....	....	1	2	....	....	1	....	....	....

Continued on next page.

MEASLES.

TABLE NO. 2 (Continued)—*Showing Deaths*

AGES.	July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 month....	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 1 and 3 mos.	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 12 mos.	....	....	1	....	....	....	....	....	....	....	....	....
Bet. 1 and 2 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 2 and 3 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 3 and 4 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 4 and 5 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 5 and 9 yrs..	....	....	....	....	....	1	....	....	....	....	....	....
Bet. 10 and 14 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 15 and 19 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 20 and 24 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 25 and 29 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 30 and 34 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 35 and 39 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 40 and 44 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 45 and 49 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 50 and 54 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 55 and 59 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 60 and 64 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 65 and 69 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 70 and 74 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 75 and 79 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 80 and 84 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 85 and 89 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 90 and 94 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Bet. 95 and 99 yrs..	....	....	....	....	....	....	....	....	....	....	....	....
Total........	....	....	1	....	....	1	....	....	....	....	....	....

MEASLES.

by Age, Months, Color and Sex, Year 1906.

October.				November.				December.				Total.			
White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
M	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
...	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
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...	....	....	....	....	....	....	....	....	....	....	....	3	3	....	....
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ANNUAL REPORT

OF THE

QUARANTINE STATION

Report of the Quarantine Station.

BALTIMORE, January 1, 1914.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

I have the honor to submit my annual report of Quarantine Station and Hospital for the year ending December 31, 1913.

The past year has been one of unusual activity at the Station, due to a general improvement in the business of the port. No quarantinable diseases, however, have entered the port during the past twelve months.

Seven hundred and fifty-three vessels were boarded and inspected. They carried crews numbering 22,297, and passengers 43,847, making a total of 73,144 persons examined during the year.

The receipts of the Station derived from tonnage tax, fumigation of vessels, care of patients, etc., amounted to the sum of $20,825.71, showing an increase of $6,115.15 over the preceding year.

Seventy cases of smallpox, four cases of other eruptive diseases and 173 suspects were cared for in the Hospital and Detention House during the year.

Nine cases of smallpox and 52 suspects were at Quarantine at the beginning of the year from the outbreak in December, in addition to which was received during the year 50 cases of smallpox, three cases of other eruptive diseases, and 107 suspects from the city.

Eleven cases of smallpox, one case of chickenpox and 14 suspects came from the counties, making a total of 247 persons taken care of at the Station during the year. Eleven cases of smallpox developed among the suspects in the Detention House and are included in the above figures.

The three tables accompanying this report show more fully the work of the entire year.

Respectfully submitted,

THOMAS L. RICHARDSON, M. D.,
Quarantine Officer.

TABLE No. 1.

Number of Vessels Boarded and Inspected at Quarantine Station During the Year Ending December 31, 1913.

MONTHS.	Number of Vessels Inspected.	Number of Persons Inspected.		
		Crews.	Passengers.	Total.
January	57	2,215	1,704	3,919
February	57	2,267	1,724	3,991
March	54	1,919	1,535	3,454
April	68	2,600	5,233	7,833
May	66	2,603	2,563	5,166
June	82	3,163	6,434	9,597
July	66	2,627	3,810	6,437
August	72	2,621	3,623	6,244
September	54	2,272	4,578	6,850
October	65	2,615	4,783	7,398
November	58	2,099	3,166	5,265
December	54	2,296	4,694	6,990
Total...........	753	29,297	43,847	73,144

TABLE No. 2.

Amount of Money Received for Quarantine Fees and Paid Into the City Treasury During the Year Ending December 31, 1913.

MONTHS.	Vessels.	Fumigations, Care of Patients, etc.	Total.
January	$1,443 57	$215 00	$1,658 57
February	1,433 15	136 00	1,569 15
March	1,251 14	155 00	1,406 14
April	1,531 45	410 00	1,941 45
May	1,461 41	422 63	1,884 04
June	1,822 88	161 20	1,984 08
July	1,442 10	420 00	1,862 10
August	1,557 91	338 10	1,896 01
September	1,245 14	135 00	1,380 14
October	1,485 58	589 32	2,074 90
November	1,252 88	235 00	1,487 88
December	1,270 25	411 00	1,681 25
Total	$17,197 46	$3,628 25	$20,825 71

TABLE No. 3.

Number of Patients Treated and Suspects Detained at Quarantine Hospital During the Year Ending December 31, 1913.

DISEASES.	Remaining in Hospital From 1912.	Received in 1913.	Total.	Discharged in 1913.	Remaining in Hospital December 31, 1913.	Total.
Smallpox	9	61	70	69	1	70
Chickenpox	......	2	2	2	......	2
Syphilis	......	2	2	2	......	2
Quarantined	52	121	173	173	......	173
Total	61	186	247	246	1	247

One birth in the Detention House; no deaths.

TABLES OF VITAL STATISTICS

OF BALTIMORE CITY

FOR THE YEAR ENDING DECEMBER 31, 1913

VITAL STATISTICS FOR THE CITY OF BALTIMORE FOR THE YEAR ENDING DECEMBER 31, 1913.

Estimated population (as of July 1, 1913)			574,577
(White, 487,750; colored, 86,827.)			
Marriages reported			6,798
Rate per 1,000 of the population			11.83
Births reported—white males	5,325		
Births reported—white females	4,984		
		10,309	
Births reported—colored males	1,133		
Births reported—colored females	1,100		
		2,233	
Total births reported			12,542
Birth rate per 1,000 of the population, whole			21.83
Birth rate per 1,000 of the population, white			21.13
Birth rate per 1,000 of the population, colored			25.71
Total mortality—white males	3,927		
Total mortality—white females	3,698		
		7,625	
Total mortality—colored males	1,317		
Total mortality—colored females	1,226		
		2,543	
Total deaths reported			10,168
Annual death rate per 1,000 of the population, whole			17.70
Annual death rate per 1,000 of the popluation, less non-residents			16.87
Annual death rate per 1 000 of the population, white			15.63
Annual death rate per 1,000 of the population, less non-residents			14.79
Annual death rate per 1,000 of the population, colored			29.29
Annual death rate per 1,000 of the popluation, less non-residents			28.28
Total deaths from typhoid fever			135
Total deaths from measles			118
Total deaths from scarlet fever			39

Total deaths from whooping cough	41
Total deaths from diphtheria and croup	81
Total deaths from influenza (la grippe)	48
Total deaths from dysentery	21
Total deaths from tuberculosis of the lungs	917
Total deaths from other forms of tuberculosis	198
Total deaths from cancers	571
Total deaths from anæmia	29
Total deaths from diseases of the heart	936
Total deaths from bronchitis	168
Total deaths from pneumonia	1,143
Total deaths from diarrhoea and enteritis, under two years	558
Total deaths from diarrhoea and enteritis, over two years	83
Total deaths from Bright's disease	902
Total deaths from puerperal hemorrhage	7
Total deaths from puerperal septicæmia	49
Total deaths from puerperal convulsions	33
Total deaths from sunstroke and heat	12
Total deaths from accidents	408
Total deaths from suicides	118
Total deaths from homicides	41
Total deaths of children under five years of age	2,732

Deaths in Public Institutions, etc.

Baltimore City Jail	9
Penitentiary	12
Hospitals and asylums	2,589
Total	2,610

Number of coroners' inquests	1,580
Number of autopsies	73
Number of non-residents dying within city limits, white	407
Number of non-residents dying within city limits, colored	77

HOWARD A. MOORE,
Statistician.

TABLE I—*Number of Infectious and Contagious Diseases Reported During Year* 1913.

DISEASES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Smallpox	27	13	1	.....	2	1	2	.....	3	.....	.....	1	50
Diphtheria	107	103	109	55	53	66	49	57	108	195	231	176	1,309
Pseudo-membranous croup	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scarlet fever	112	119	121	122	118	89	54	58	63	79	105	98	1,138
Typhoid fever	53	40	38	17	31	51	148	314	233	129	65	44	1,163
Measles	224	738	1,768	1,815	837	196	80	21	5	11	14	15	5,724
Mumps	8	9	20	25	23	12	6	3	8	6	10	31	161
Whooping cough	17	14	20	43	18	30	43	16	13	21	26	29	290
Varicella	121	99	100	75	39	12	2	2	2	23	47	73	595
Tuberculosis pulmonalis	167	138	147	142	149	102	95	83	148	164	82	124	1,541
Poliomyelitis	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	2
Cholera	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yellow fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	836	1,273	2,325	2,294	1,270	559	480	554	583	628	580	591	11,973

TABLE II—*Number of Deaths According to Age During the Year* 1913.

AGES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Under 3 months................	75	90	77	76	101	99	109	122	105	84	93	90	1,121
Between 3 and 12 months........	45	49	64	55	58	93	173	98	83	64	44	55	881
Between 1 and 2 years...........	24	23	36	40	50	34	62	34	24	20	22	30	399
Between 2 and 3 years...........	19	15	16	19	14	17	13	13	9	8	17	17	177
Between 3 and 4 years...........	8	9	6	18	6	4	9	5	3	1	7	2	78
Between 4 and 5 years...........	9	8	8	6	11	7	8	5	2	3	2	7	76
Total under 5 years........	180	194	207	214	240	254	374	277	226	180	185	201	2,732
Between 5 and 9 years.......	10	22	25	21	29	20	21	9	17	17	10	9	210
Between 10 and 14 years.......	11	15	9	7	14	9	10	10	6	6	3	5	105
Between 15 and 19 years.......	16	25	22	24	23	15	19	12	16	21	11	18	222
Between 20 and 24 years.......	53	32	49	33	38	33	32	23	29	27	20	30	399
Between 25 and 29 years.......	44	44	49	36	52	35	33	25	30	33	32	32	445
Between 30 and 34 years.......	40	42	46	42	34	32	38	39	27	40	24	50	454
Between 35 and 39 years.......	50	36	53	39	38	30	38	38	39	38	38	34	471
Between 40 and 44 years.......	55	50	43	43	57	48	32	30	37	45	47	58	545
Between 45 and 49 years.......	52	50	61	49	53	45	46	43	30	51	49	45	574
Between 50 and 54 years.......	59	47	70	52	37	57	48	57	43	43	40	53	606

Between 55 and 59 years	59	67	45	44	46	50	46	45	38	39	40	69	588
Between 60 and 64 years	59	58	56	46	54	49	45	39	44	41	57	49	597
Between 65 and 69 years	79	73	54	45	52	40	46	44	32	49	43	67	624
Between 70 and 74 years	53	69	63	47	47	47	37	40	31	55	47	65	601
Between 75 and 79 years	50	39	48	42	33	34	30	25	23	19	44	49	436
Between 80 and 84 years	37	28	28	31	30	15	34	25	19	32	27	24	330
Between 85 and 89 years	16	17	23	15	16	9	12	9	13	6	10	8	154
Between 90 and 94 years	10	5	3	4	8	7	5	1	3	5	4	6	61
Between 95 and 99 years	1	1	1	2	1	2	.....	1	.....	1	.....	1	11
Between 100 and 104 years	1	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	3
Between 105 and 109 years	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Over 110 years	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unknown age	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	935	914	955	837	902	831	946	792	703	748	732	873	10,168

TABLE III—*Number of Deaths According to Age,*

Ages.	Jan.		Feb.		March.		April.		May.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 3 months........	35	21	34	39	22	36	28	27	39	42
Bet. 3 and 12 months...	18	7	18	14	27	19	25	17	25	18
Bet. 1 and 2 yrs........	9	6	8	5	12	11	17	11	22	15
Bet. 2 and 3 yrs........	8	6	4	3	6	4	3	8	5	5
Bet. 3 and 4 yrs........	3	3	3	1	4	1	7	10	4	2
Bet. 4 and 5 yrs........	....	5	2	2	3	1	4	1	5	2
Total under 5 yrs.	73	48	69	64	74	72	84	74	100	84
Bet. 5 and 9 yrs....	7	....	3	11	8	8	9	9	6	13
Bet. 10 and 14 yrs....	5	2	4	7	4	2	2	4	4	6
Bet. 15 and 19 yrs....	6	5	5	13	4	7	13	1	7	7
Bet. 20 and 24 yrs....	10	20	10	13	18	12	13	7	12	17
Bet. 25 and 29 yrs....	18	13	22	11	16	13	13	9	20	17
Bet. 30 and 34 yrs....	11	13	17	17	24	12	21	7	10	9
Bet. 35 and 39 yrs....	19	14	13	8	27	14	18	11	14	11
Bet. 40 and 44 yrs....	18	10	12	14	19	11	17	14	22	17
Bet. 45 and 49 yrs....	18	14	20	14	30	20	18	13	21	15
Bet. 50 and 54 yrs....	20	17	14	15	32	20	30	10	12	9
Bet. 55 and 59 yrs....	20	26	34	17	25	11	21	14	14	21
Bet. 60 and 64 yrs....	15	30	24	23	24	22	17	21	27	23
Bet. 65 and 69 yrs....	32	35	37	26	18	28	16	22	22	25
Bet. 70 and 74 yrs....	20	27	26	38	20	32	23	18	18	25
Bet. 75 and 79 yrs....	15	27	15	17	19	23	14	24	9	20
Bet. 80 and 84 yrs....	12	24	10	16	9	16	16	13	10	19
Bet. 85 and 89 yrs....	1	14	6	9	8	13	6	8	2	12
Bet. 90 and 94 yrs....	4	6	....	4	....	2	1	3	1	6
Bet. 95 and 99 yrs....	....	1	1	....	....	1	1	1	....	1
Bet. 100 and 104 yrs....	....	1	....	....	....	....	....	....	....	....
Bet. 105 and 109 yrs....	....	....	....	....	....	....	....	....	....	....
Over 110 years.........	....	....	....	....	....	....	....	....	....	....
Unknown age...........	....	....	....	....	....	....	....	....	....	....
Total............	324	347	342	337	379	339	353	283	331	357

Sex and Color During the Year 1913—White.

June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		Total.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
44	34	53	30	46	44	42	31	37	17	33	29	50	19	832
32	37	72	66	37	42	31	30	26	18	16	14	21	15	645
13	9	33	18	16	11	13	6	6	7	11	4	10	11	284
5	9	1	8	3	6	4	4	4	1	7	5	5	6	120
1	2	2	5	2	2	2	1	....	....	2	5	1	1	64
2	4	5	2	2	1	1	1	....	3	....	1	3	2	51
97	95	166	129	106	106	93	73	73	46	69	57	90	54	1,996
6	10	7	6	6	2	8	3	7	5	4	5	2	2	147
3	4	4	2	4	1	....	1	1	2	1	2	3	2	70
3	3	5	6	7	3	6	7	3	7	4	5	6	4	137
10	11	7	12	7	8	7	12	11	8	11	8	10	14	268
12	7	9	8	9	8	9	15	14	9	12	7	10	7	288
5	11	15	13	10	21	15	8	16	11	9	8	14	17	314
8	12	11	10	16	8	17	9	13	3	10	12	19	8	305
21	14	8	13	11	7	12	11	21	10	15	9	19	15	340
18	18	20	12	16	13	9	10	16	17	23	15	19	14	403
22	13	17	18	27	10	20	19	21	9	11	11	21	18	410
20	19	25	12	24	13	19	10	15	17	19	15	32	27	470
17	25	16	17	16	17	19	17	18	17	18	25	27	17	492
17	14	18	24	18	17	15	13	20	22	20	19	24	34	536
22	23	14	17	15	20	11	17	24	24	21	22	27	34	538
14	19	10	17	8	17	13	9	4	12	14	28	20	24	392
5	9	11	20	7	17	9	9	11	19	11	14	12	11	310
5	3	1	9	4	4	3	9	3	3	3	6	2	5	139
1	4	2	3	1	....	....	2	1	3	1	2	3	3	53
....	1	....	....	....	....	....	....	1	....	....	....	....	1	9
....	....	....	....	....	....	....	....	....	....	....	1	....	....	2
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
306	315	366	348	312	292	285	254	293	244	276	271	360	311	7,625

TABLE IV—*Number of Deaths According to Age,*

AGES.	Jan.		Feb.		March.		April.		May.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 3 months........	12	7	12	5	14	5	12	9	10	10
Bet. 3 and 12 months...	13	7	10	7	12	6	7	6	11	4
Bet. 1 and 2 yrs........	2	7	7	3	7	6	7	5	8	5
Bet. 2 and 3 yrs........	4	1	4	4	2	4	3	5	1	3
Bet. 3 and 4 yrs........	1	1	3	2	....	1	....	1	....	....
Bet. 4 and 5 yrs........	3	1	3	1	4	....	....	1	2	2
Total under 5 yrs.	35	24	39	22	39	22	29	27	32	24
Bet. 5 and 9 yrs....	2	1	2	6	5	4	1	2	2	8
Bet. 10 and 14 yrs....	2	2	1	3	....	3	....	1	2	2
Bet. 15 and 19 yrs....	3	2	2	5	5	6	4	6	6	3
Bet. 20 and 24 yrs....	14	9	5	4	10	9	9	4	2	7
Bet. 25 and 29 yrs....	8	5	5	6	11	9	9	5	7	8
Bet. 30 and 34 yrs....	7	9	1	7	7	3	11	3	9	6
Bet. 35 and 39 yrs....	12	5	6	9	9	3	5	5	10	3
Bet. 40 and 44 yrs....	16	11	12	12	10	3	4	8	11	7
Bet. 45 and 49 yrs....	11	9	7	9	6	5	11	7	10	7
Bet. 50 and 54 yrs....	14	8	10	8	9	9	9	3	10	6
Bet. 55 and 59 yrs....	4	9	11	5	5	4	3	6	3	8
Bet. 60 and 64 yrs....	8	6	4	7	7	3	6	2	1	3
Bet. 65 and 69 yrs....	7	5	7	3	3	5	4	3	1	4
Bet. 70 and 74 yrs....	2	4	3	2	4	7	2	4	1	3
Bet. 75 and 79 yrs....	5	3	3	4	4	2	3	1	3	1
Bet. 80 and 84 yrs....	1	....	1	1	2	1	1	1	1	....
Bet. 85 and 89 yrs....	....	1	1	1	....	2	1	....	....	2
Bet. 90 and 94 yrs....	....	....	....	1	....	1	....	....	....	1
Bet. 95 and 99 yrs....	....	....	....	....	....	....	....	....	....	....
Bet. 100 and 104 yrs....	....	....	....	....	....	....	1	....	....	....
Bet. 105 and 109 yrs....	....	....	....	....	....	....	....	....	....	....
Over 110 years.........	....	....	....	....	....	....	....	....	....	....
Unknown age..........	....	....	....	....	....	....	....	....	....	....
Total.............	151	113	120	115	136	101	113	88	111	103

Sex and Color During the Year 1913—*Colored.*

June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		Total.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
12	9	15	11	17	15	9	23	18	12	13	18	8	13	289
14	10	21	14	12	7	12	10	12	8	6	8	10	9	236
7	5	5	6	4	3	3	2	3	4	3	4	4	5	115
3	....	2	2	1	3	1	....	1	2	4	1	3	3	57
....	1	1	1	1	....	....	....	1	....	....	....	....	....	14
1	....	1	....	1	1	....	....	....	....	....	2	1	1	25
37	25	45	34	36	29	25	35	35	26	26	33	26	31	736
3	1	4	4	....	1	2	4	2	3	1	....	2	3	63
1	1	2	2	....	5	4	1	2	1	....	....	....	....	35
3	6	5	3	1	1	....	3	3	8	1	1	2	6	85
4	8	9	4	6	2	4	6	6	2	1	....	1	5	131
10	6	8	8	4	4	4	2	6	4	6	7	5	10	157
8	8	4	6	3	5	2	2	6	7	3	4	9	10	140
7	3	9	8	9	5	8	5	13	9	9	7	4	3	166
8	5	5	6	6	6	7	7	6	8	11	12	17	7	205
4	5	5	9	8	6	6	5	8	10	4	7	10	2	171
12	10	4	9	9	11	1	3	8	5	8	10	3	11	190
6	5	2	7	3	5	3	6	2	5	4	2	7	3	118
3	4	6	6	2	4	5	3	3	3	8	6	....	5	105
7	2	2	2	6	3	2	2	4	3	2	2	2	7	88
1	1	1	5	1	4	2	1	4	3	....	4	1	3	63
1	....	....	3	....	....	1	....	2	1	1	1	1	4	44
....	1	....	3	....	1	....	1	....	2	2	....	1	....	20
1	....	....	2	....	1	....	1	....	....	....	1	....	1	15
1	1	....	....	....	....	....	1	....	1	....	1	....	....	8
....	1	....	....	....	1	....	....	....	....	....	....	....	....	2
....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
117	93	111	121	94	94	76	88	110	101	87	98	91	111	2,543

TABLE V *Nativity of the Decedents for the Year 1913.*

NATIVITY.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
United States—White males	244	261	280	272	246	243	295	250	229	220	208	268	3,016
United States—White females	247	260	262	215	266	253	278	228	190	183	196	236	2,823
United States—White, sex unknown	....	....	....	....	....	....	....	....	....	....	....	....	......
United States—Colored males	147	114	130	109	109	58	110	93	52	68	78	87	1,155
United States—Colored females	113	113	99	88	103	59	118	94	53	60	97	111	1,108
Foreign—White males	73	74	94	74	73	115	70	56	74	105	65	84	957
Foreign—White females	96	73	73	64	81	92	70	60	88	101	75	75	948
Foreign—Colored males	1	1	....	....	....	....	....	....	....	....	....	1	3
Foreign—Colored females	....	....	....	....	....	....	....	....	....	....	....	....	......
Unknown—White males	7	7	5	7	12	5	1	6	4	5	3	8	70
Unknown—White females	4	4	4	4	10	3	....	4	2	1	....	....	36
Unknown—Colored males	3	5	6	4	2	2	1	1	2	5	9	3	43
Unknown—Colored females	....	2	2	....	....	1	3	....	....	....	1	....	9
Total	935	914	955	837	902	831	946	792	703	748	732	873	10,168

Marriages for the Year 1913.

	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Marriages	511	409	468	557	460	833	472	526	631	657	665	608	6,798

TABLE VI—*Number of Births Reported During the Year* 1913.

SEX AND COLOR.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
White males	489	409	388	413	401	376	449	504	498	457	461	480	5325
White females	415	383	403	425	375	369	395	489	420	479	437	394	4984
Colored males	116	92	109	83	109	63	80	119	109	97	64	92	1133
Colored females	120	99	92	84	88	53	100	112	102	80	78	92	1100
Total	1140	983	992	1005	973	861	1024	1224	1129	1113	1040	1058	12,542
Illegitimates.													
White males	23	14	16	9	15	10	18	16	25	14	15	11	186
White females	19	14	22	18	17	6	18	9	17	11	22	14	187
Colored males	19	27	22	12	27	9	22	25	32	22	14	16	247
Colored females	19	25	14	15	23	8	14	27	25	22	15	17	224
Total	80	80	74	54	82	33	72	77	99	69	66	58	844
Still Births.													
White males	34	35	28	32	29	32	39	35	32	23	42	38	399
White females	17	15	14	13	20	12	16	13	13	15	16	18	182
Colored males	13	22	20	22	13	19	16	11	19	14	18	21	208
Colored females	9	14	6	14	11	9	12	7	9	11	8	10	120
Total	73	86	68	81	73	72	83	66	73	63	84	87	909

TABLE VII—*Number of Deaths According to Wards During the Year* 1913.

WARDS.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
First	27	46	43	36	39	30	60	43	31	26	30	30	441
Second	30	23	37	20	26	32	44	36	34	32	28	22	364
Third	35	26	30	27	24	34	33	28	24	22	20	27	330
Fourth	50	52	54	52	52	51	45	49	39	41	39	40	564
Fifth	28	26	38	25	31	29	25	25	23	32	24	25	331
Sixth	25	42	37	47	36	35	40	24	36	32	31	48	433
Seventh	47	44	44	49	40	44	46	45	33	29	33	47	501
Eighth	36	41	41	47	47	38	40	32	30	38	36	44	470
Ninth	38	28	32	31	23	31	31	32	18	31	25	51	371
Tenth	29	51	32	31	38	30	42	28	25	23	32	28	389
Eleventh	43	28	28	32	37	25	23	36	28	20	32	45	377
Twelfth	46	37	39	22	35	38	41	36	25	41	37	46	443
Thirteenth	37	27	37	23	33	32	31	25	27	42	26	28	368
Fourteenth	53	52	60	54	76	37	61	50	38	40	46	54	621
Fifteenth	37	44	55	35	46	47	41	35	36	44	37	50	507
Sixteenth	38	45	36	36	40	34	38	31	31	36	34	36	435
Seventeenth	40	46	41	54	34	37	38	30	33	39	32	31	455
Eighteenth	43	28	38	28	30	31	44	38	32	23	37	30	402
Nineteenth	53	36	44	36	37	41	47	29	27	31	28	35	444
Twentieth	31	42	53	35	44	33	41	30	34	23	30	41	437
Twenty-first	24	29	32	37	25	42	35	24	25	19	25	23	340

Twenty-second	20	20	30	28	31	17	29	32	21	28	28	28	311
Twenty-third	28	23	20	17	32	31	23	18	26	27	20	20	286
Twenty-fourth	40	23	38	35	46	32	48	36	27	29	22	22	420
Bay View—													
Counted in city deaths	57	55	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	128
Not counted in city deaths	.....	.....	26	52	67	52	41	61	61	41	43	52	496
Total	935	914	955	837	902	831	946	792	703	748	732	873	10,168

TABLE VIII.—*Number of Deaths in Hospitals, Public Institutions, Inquests, Etc., During the Year 1913*

HOSPITALS, INSTITUTIONS, ETC.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Hospitals—													
Resident, white	106	96	115	90	98	104	109	106	81	105	88	114	1212
Resident, colored	34	34	37	28	34	41	38	32	34	32	34	36	417
Non-resident, white	21	27	40	38	40	21	30	12	26	31	31	27	383
Non-resident, colored	11	4	10	7	1	10	9	4	1	10	3	1	77
Other Institutions, Asylums, Etc.													
Resident, white	17	31	30	31	49	22	34	21	14	17	10	18	294
Resident, colored	6	11	6	4	.....	5	7	1	1	3	3	2	49
Non-resident, white	1	2	.....	3	.....	1	3	4	1	.....	.....	9	24
Non-resident, colored	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
Jail—													
White residents	.....	1	1	.....	1	1	.....	.....	.....	.....	1	.....	5
White non-residents	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
Colored residents	1	.....	.....	.....	.....	1	1	.....	1	.....	.....	.....	4
Colored non-residents	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
Penitentiary—													
White residents	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	2
White non-residents	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
Colored residents	3	.....	.....	1	1	2	.....	.....	.....	1	1	1	10
Colored non-residents	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
Bay View Asylum—													
Counted in city deaths	57	55	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	128
Not counted in city deaths	.....	.....	26	52	67	52	41	61	61	41	43	52	496
Sydenham Hospital—													
Counted in city deaths	2	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
Not counted in city deaths	.....	.....	.....	5	1	1	2	2	2	1	.....	1	15
Total	250	264	255	202	236	212	231	210	162	209	171	208	2610
Coroners' inquests	112	146	159	124	142	125	173	119	97	124	135	124	1580
Autopsies	8	7	7	6	6	5	5	7	3	8	8	3	73

TABLE IX—*Number of Deaths According to Occupations During the Year* 1913.

OCCUPATIONS.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Artists and Designers	....	....	1	....	....	1	....	....	....	1	....	....	3
Bakers	5	2	2	3	3	2	2	....	1	2	1	1	24
Barbers and Wigmakers	....	3	3	....	2	2	8	....	2	1	1	2	24
Blacksmiths and Wheelwrights	5	1	2	1	1	1	2	3	2	5	2	3	28
Bookkeepers and Clerks	22	16	13	14	12	11	8	14	16	12	14	25	177
Brassfinishers	....	....	....	....	1	....	....	1	....	....	....	....	2
Bricklayers and Masons	....	1	3	1	2	2	1	1	3	....	3	1	18
Butchers	4	3	2	4	2	1	3	4	2	3	....	3	31
Cabinetmakers	....	1	2	....	....	....	1	1	....	1	....	2	8
Carpenters and Builders	5	10	10	9	6	7	5	8	5	5	7	7	84
Cigarmakers and Dealers	....	3	3	1	2	3	1	....	2	3	6	1	25
Clergymen	1	1	....	1	....	1	1	1	....	3	....	....	9
Confectioners and Fruiterers	1	....	....	1	....	....	....	....	....	....	....	....	2
Cooks	9	13	3	8	6	7	8	10	5	7	10	10	96
Diemakers	....	....	....	....	....	....	....	....	....	....	....	....	....
Drivers and Hostlers	10	15	16	17	6	8	10	5	2	10	10	12	121
Druggists and Chemists	2	2	2	1	1	1	1	2	2	1	....	1	16
Dyers and Scourers	....	....	....	1	....	1	....	....	....	....	....	....	2
Electrical Workers	....	1	1	1	1	1	1	1	....	....	....	2	9
Engineers and Machinists	9	7	10	5	10	6	7	5	4	10	3	5	81
Firemen	2	2	6	1	....	2	....	3	1	....	....	1	18
Gasfitters	....	....	....	....	....	....	....	....	....	....	....	....	....
Grocers	....	....	2	3	1	1	....	4	2	1	2	3	19
Hodcarriers	2	....	....	1	1	2	1	....	1	....	....	....	8
Horseshoers	....	....	1	....	....	1	....	....	2	1	....	....	5
Housewives	177	126	110	91	136	100	106	82	83	99	90	96	1,308
Jewelers and Watchmakers	....	....	....	....	....	....	1	1	....	....	1	2	5

TABLE IX (Continued)—*Number of Deaths According to Occupations During the Year* 1913.

OCCUPATIONS.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Laborers	85	70	86	61	60	58	48	52	45	71	53	63	752
Laundrymen and Laundresses	9	10	15	8	5	6	10	12	5	15	7	9	111
Lawyers	1	1	5	2	1	.....	.....	2	1	1	1	2	17
Liquor Dealers and Barkeepers	4	2	7	4	3	4	1	3	4	2	4	2	40
Merchants	8	18	9	11	10	6	8	3	6	9	9	16	113
Mill Operatives	1	1	3	1	.....	1	1	.....	1	1	2	.....	12
Moulders	1	3	.....	1	1	1	1	3	2	.....	2	4	19
Nurses	5	1	1	1	1	2	.....	1	1	2	4	2	21
Oyster Shuckers	2	.....	1	1	.....	.....	.....	.....	.....	.....	4	1	9
Painters and Varnishers	5	4	5	5	4	6	6	5	5	4	2	.....	51
Paperhangers and Decorators	1	2	1	3	1	.....	.....	2	.....	1	1	.....	12
Physicians and Dentists	2	1	1	3	4	3	2	2	1	.....	5	1	25
Planing Mill Workers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
Plasterers and Lathers	.....	.....	2	3	1	.....	.....	2	.....	1	.....	.....	9
Plumbers and Steamfitters	5	2	1	3	.....	2	3	1	4	2	2	3	28
Policemen and Watchmen	4	6	4	5	4	2	2	2	5	7	4	8	53
Printers and Bookbinders	5	3	2	3	3	.....	2	1	2	2	4	1	28
Religieuse	2	1	4	.....	1	.....	2	1	.....	1	1	3	16
Salesmen and Salesladies	6	5	13	4	13	9	4	2	7	3	7	7	80
School Teachers	1	3	2	1	.....	1	3	.....	.....	2	3	3	19
Seamstresses	4	5	5	4	2	6	5	5	6	6	13	7	68
Servants	26	35	30	15	14	16	24	16	12	17	18	25	248
Shoemakers and Harnessmakers	3	5	7	4	2	2	4	5	1	1	6	1	41
Solicitors and Collectors	.....	2	4	2	.....	2	3	.....	1	.....	.....	7	21
Steam Railway Employes	5	5	13	6	2	3	4	1	6	4	4	5	58
Stevedores	5	6	9	7	9	5	5	1	5	3	2	2	59
Stonecutters and Marbleworkers	.....	.....	1	.....	1	2	2	.....	1	3	1	1	12

Street Pavers	1	....	....	....	1	....	....	....	....	2	....	....	4
Street Railways Employes	2	2	2	1	2	2	1	1	3	1	2	3	22
Structural Iron Workers	....	....	....	....	....	....	1	....	....	....	....	1	2
Tailors and Clothiers	4	7	12	12	8	6	10	7	4	3	7	9	89
Tilesetters and Cementers	....	....	....	....	....	....	....	....	....	....	....	....	....
Tin and Sheet-iron Workers	1	1	1	3	1	1	2	1	2	3	2	2	20
Upholsterers	2	1	....	....	3	....	....	....	2	....	....	1	9
All others	132	141	140	151	149	133	134	142	100	130	137	172	1,661
Not specified	349	364	368	346	402	391	491	373	336	286	275	335	4,316
Total	935	914	955	837	902	831	946	792	703	748	732	873	10,168

TABLE X—*Showing Deaths According to*

SOCIAL CONDITION.	Jan.		Feb.		March.		April.		May.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
White.										
Single	145	99	137	126	157	138	167	111	172	139
Married	144	127	144	94	164	92	132	85	120	108
Widows	....	117	....	115	....	107	....	87	....	110
Widowers	29	....	57	....	54	....	48	....	33	....
Divorced	2	2	....	....	....	2	2	....	2	....
Not given	5	1	4	2	4	....	4	....	4	....
Total	325	346	342	337	379	339	353	283	331	357
Colored.										
Single	79	49	61	52	78	50	59	46	62	48
Married	49	27	44	32	43	24	41	20	41	32
Widows	....	36	....	29	....	27	....	22	....	23
Widowers	18	....	13	....	14	....	10	....	7	....
Divorced	....	2	....	....	....	....	....	....	....	....
Not given	4	....	2	2	1	....	3	....	1	....
Total	150	114	120	115	136	101	113	88	111	103

Social Condition During the Year 1913.

June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
147	143	231	169	160	145	147	126	129	76	115	103	166	101	3,349
119	88	99	82	113	78	102	65	123	96	119	78	138	106	2,616
.....	80	....	97	....	68	....	62	....	70	....	88	....	103	1,104
34	....	36	....	35	....	33	....	35	....	39	....	51	....	484
2	3	....	....	1	1	1	1	1	2	2	1	....	....	25
4	1	....	....	3	....	2	....	5	....	1	1	5	1	47
306	315	366	348	312	292	285	254	293	244	276	271	360	311	7,625
70	46	71	63	52	47	42	53	61	42	43	41	55	54	1,324
39	29	33	28	32	24	23	15	40	31	33	39	26	24	769
.....	18	....	29	....	23	....	20	....	28	....	17	....	33	305
7	....	6	....	7	....	9	....	7	....	8	....	8	....	114
.....	....	....	....	1	....	....	....	....	1	....	1	....	....	5
1	....	1	1	2	....	2	....	1	....	3	....	2	....	26
117	93	111	121	94	94	76	88	109	102	87	98	91	111	2,543

TABLE XI—*Number of Deaths by Months,*

MONTHS.	Typhoid Fever.	Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Pseudo-Membranous Croup.	Croup.	Tuberculosis of Lungs.	Other Tuberculous Diseases.	Cancer.	Diseases of the Nervous System.	Heart Diseases.
January	8	...	2	4	...	12	...	117	18	51	76	79
February	13	...	10	6	3	6	...	100	16	41	93	101
March	8	...	22	4	2	2	...	103	17	38	93	95
April	3	...	27	7	1	5	...	71	20	47	85	70
May	6	...	28	4	2	6	...	78	30	46	68	90
June	9	...	8	2	4	5	...	63	21	48	84	57
July	15	...	3	3	7	4	...	67	12	54	69	79
August	22	...	5	...	7	3	...	53	20	44	57	78
September	20	...	1	1	5	5	...	63	11	40	72	50
October	18	...	2	3	2	8	...	63	15	50	67	75
November	8	...	...	1	4	13	...	70	10	45	68	63
December	5	...	10	4	4	12	...	69	8	67	74	93
Total	135	...	118	39	41	81	...	917	198	571	906	936

According to Causes, During the Year 1913.

Bronchitis.	Pneumonia.	Diseases of the Digestive System.	Diarrhoeal Diseases Under 2 Years of Age.	Diarrhoeal Diseases Over 2 Years of Age.	Bright's Disease.	Puerperal Fever.	Congenital Debility, Premature Birth, Etc.	Suicides.	Accidents.	Homicides.	All Other Diseases.	Deaths Under 5 Years of Age.	Total.
22	158	37	9	4	94	4	42	8	23	4	163	180	935
23	148	33	6	3	85	3	43	11	33	3	134	194	914
24	126	35	16	8	79	3	39	8	55	1	177	207	955
16	118	37	11	4	92	2	47	8	37	3	126	214	837
8	111	44	22	4	84	8	53	9	33	3	165	240	902
8	72	44	66	6	82	10	53	12	31	1	145	254	831
7	48	44	184	17	55	5	59	12	46	6	150	374	946
12	43	29	108	17	65	3	61	8	28	3	126	277	792
7	42	42	75	6	56	1	68	10	23	1	104	226	703
10	72	43	32	5	72	1	56	5	34	6	108	180	748
16	91	31	16	5	58	4	55	14	36	4	115	185	732
15	114	37	13	4	80	5	54	13	29	6	157	201	873
168	1.143	456	558	83	902	49	630	118	408	41	1,670	2.732	10,168

TABLE XII—*Number of Deaths from All Causes During the Year 1913.*

DISEASES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
I—General Diseases.													
1. Typhoid fever	8	13	8	3	6	9	15	22	20	18	8	5	135
2. Typhus fever	....	....	....	....	....	....	....	....	....	....	....	....	......
3. Relapsing fever	....	....	....	....	....	....	....	....	....	....	....	....	......
4. Malaria	....	....	....	1	....	2	....	....	....	1	4	1	9
5. Smallpox	....	....	....	....	....	....	....	....	....	....	....	....	......
6. Measles	2	10	22	27	28	8	3	5	1	2	....	10	118
7. Scarlet fever	4	6	4	7	4	2	3	1	3	1	1	4	39
8. Whooping cough	....	3	2	1	2	4	7	7	5	2	4	4	41
9. Diphtheria and croup	12	6	2	5	6	5	4	3	5	8	13	12	81
10. Influenza	11	12	8	5	1	1	1	....	....	2	2	5	48
11. Miliary fever	....	....	....	....	....	....	....	....	....	....	....	....	......
12. Asiatic cholera	....	....	....	....	....	....	....	1	....	....	....	....	1
13. Cholera nostras	....	....	....	....	....	....	1	....	1	....	....	....	2
14. Dysentery	2	....	1	1	....	4	5	6	....	....	....	2	21
15. Plague	....	....	....	....	....	....	....	....	....	....	....	....	......
16. Yellow fever	....	....	....	....	....	....	....	....	....	....	....	....	......
17. Leprosy	....	....	....	....	....	....	....	....	....	....	....	....	......
18. Erysipelas	....	4	6	2	2	3	2	1	1	1	....	1	23
19. Other epidemic diseases	....	....	*1	....	....	....	....	....	....	....	†1	....	2
20. Purulent infection and septichaemia	11	9	5	5	2	10	3	3	3	....	1	1	53
21. Glanders	....	....	....	....	....	....	....	....	....	....	....	....	......
22. Anthrax	....	....	....	....	....	....	....	....	....	....	....	....	......

23. Rabies	....	....	....	....	....	....	....	....	....	....	....	....	......
24. Tetanus	1	1	1	1	....	2	3	3	2	1	1	....	16
25. Mycoses	....	....	....	....	....	....	....	....	....	....	....	....	......
26. Pellagra	....	....	....	....	1	1	1	2	....	1	....	....	6
27. Beriberi	....	....	....	....	....	....	....	....	....	....	....	....	......
28. Tuberculosis of the lungs	117	100	103	71	78	63	67	53	63	63	70	69	917
29. Acute miliary tuberculosis	4	6	2	3	5	8	3	5	....	5	3	4	48
30. Tuberculous meningitis	9	4	10	9	10	6	8	7	5	5	2	1	76
31. Abdominal tuberculosis	1	3	3	4	8	3	....	4	4	1	2	3	36
32. Pott's disease	3	2	1	1	1	1	1	....	1	1	1	....	13
33. White swellings	....	....	1	....	1	2	....	1	1	....	1	....	7
34. Tuberculosis of other organs	....	....	....	2	2	....	....	2	....	3	1	....	10
35. Disseminated tuberculosis	1	1	....	1	3	1	....	1	....	....	....	....	8
36. Rickets	1	....	1	1	....	....	2	....	1	....	....	5	11
37. Syphilis	8	4	8	6	13	9	5	4	8	9	5	10	89
38. Gonococcus infection	....	....	....	....	....	....	....	....	....	1	....	....	1
Cancers and Other Malignant Tumors.													
39. Of the buccal cavity	4	1	1	1	2	5	1	1	....	1	4	2	23
40. Of the stomach and liver	19	15	17	21	21	21	30	13	14	14	18	40	243
41. Of the peritonaeum, intestines and rectum	5	5	4	4	2	1	3	10	7	9	2	6	58
42. Of the female genital organs	7	7	6	7	12	9	9	9	6	10	11	7	100
43. Of the breast	6	6	4	4	2	2	5	4	6	2	3	4	48
44. Of the skin	1	....	....	....	....	....	2	....	....	....	1	....	4
45. Of other organs and of organs not specified	9	7	6	10	7	10	4	7	7	14	6	8	95
46. Other tumors (tumors of the female genital organs excepted)	....	....	....	1	3	1	2	....	....	....	....	1	8
47. Acute articular rheumatism	2	6	5	5	5	2	3	1	....	....	3	3	35
48. Chronic rheumatism and gout	2	1	2	....	3	6	4	2	3	3	6	5	37
49. Scurvy	....	....	....	....	....	....	....	....	....	1	....	....	1
50. Diabetes	11	4	14	5	12	7	6	8	4	4	6	6	87
51. Exophthalmic goitre	1	....	1	....	3	....	2	....	1	....	1	2	11

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*Varicella. †Mumps.

TABLE XII (Continued)—*Number of Deaths from All Causes During the Year 1913.*

DISEASES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
52. Addison's disease	....	....	....	....	....	....	....	1	....	1	....	....	2
53. Leuchaemia	....	....	2	....	....	1	1	....	1	2	1	1	9
54. Anaemia, chlorosis	3	....	1	2	2	4	....	8	4	2	1	2	29
55. Other general diseases	....	....	3	....	....	....	2	....	....	1	....	....	6
56. Alcoholism, acute or chronic	9	3	4	5	6	3	5	3	4	2	4	9	57
57. Chronic lead poisoning	....	....	....	....	....	....	....	1	....	....	1	....	2
58. Other chronic occupation poisoning	....	....	....	....	....	....	....	....	....	....	....	....	....
59. Other chronic poisonings	....	....	....	....	....	....	....	....	....	....	....	....	....
II—*Diseases of the Nervous System and of the Organs of Special Sense.*													
60. Encephalitis	1	....	1	....	....	....	....	....	5	....	1	1	9
61. Simple meningitis	7	10	10	9	10	8	7	2	4	2	4	2	75
Epidemic cerebral spinal	....	2	2	1	....	3	2	2	1	....	....	....	13
62. Locomotor ataxia	....	....	1	....	....	1	3	1	2	2	1	....	11
63. Other diseases of the spinal cord	2	2	1	....	....	1	....	2	2	2	1	1	14
Infantile paralysis	....	....	1	....	....	....	....	....	....	....	....	....	1
64. Cerebral haemorrhage, apoplexy	43	55	48	46	47	46	34	34	40	40	44	53	530
65. Softening of the brain	....	....	3	1	....	....	....	1	....	2	1	....	8
66. Paralysis without specified cause	12	12	14	14	3	8	13	7	6	9	11	12	121
67. General paralysis of the insane	1	2	1	....	....	....	1	1	1	....	....	1	8
68. Other forms of mental alienation	....	....	1	1	....	2	....	1	2	....	1	1	9
69. Epilepsy	2	1	....	2	....	2	....	1	3	1	....	....	12
70. Convulsions (nonpuerperal)	....	....	1	....	....	....	....	....	....	....	....	....	1
71. Convulsions of infants	4	8	7	5	5	10	8	3	3	3	4	....	60

72. Chorea	....	....	....	....	....	....	1	....	....	....	....	....	1
73. Neuralgia and neuritis	1	....	....	1	....	1	....	2	1	....	....	....	6
74. Other diseases of the nervous system	3	1	2	5	3	2	....	....	2	6	....	3	27
75. Diseases of the eyes and their annexa	....	....	....	....	1	....	....	....	....	....	....	....	1
76. Diseases of the ears	1	2	3	2	3	....	2	....	2	....	2	2	19
III—Diseases of the Circulatory System.													
77. Pericarditis	....	1	....	....	2	1	2	1	1	....	....	....	8
78. Acute endocarditis	8	4	4	2	3	4	5	5	3	....	7	8	57
79. Organic diseases of the heart	67	89	87	65	76	49	67	71	45	69	54	73	812
80. Angina pectoris	4	7	4	3	9	3	5	1	1	3	7	12	59
81. Diseases of the arteries, atheroma, aneuryism, etc.	18	11	12	12	15	7	7	15	18	16	19	32	182
82. Embolism and thrombosis	2	3	1	1	5	....	3	2	....	1	3	1	22
83. Diseases of veins (varices, haemorrhoids, phlebitis, etc.)	1	....	1	....	....	....	....	....	....	....	....	....	2
84. Diseases of the lymphatic system (lymphangitis, etc.)	....	....	....	....	....	....	....	....	....	....	....	1	1
85. Haemorrhage; other diseases of the circulatory system	....	1	2	....	....	....	....	....	1	....	1	....	5
IV—Diseases of the Respiratory System.													
86. Diseases of the nasal fossae	....	....	....	....	....	....	....	....	....	....	....	....	......
87. Diseases of the larynx	....	....	....	1	2	....	2	2	1	3	1	1	13
88. Diseases of the thyreoid body	1	....	....	....	....	1	....	....	....	....	....	....	2
89. Acute bronchitis	12	14	16	13	2	3	4	7	5	5	9	11	101
90. Chronic bronchitis	10	9	8	3	6	5	3	5	2	5	7	4	67
91. Broncho-pneumonia	47	58	50	56	52	39	28	26	20	40	49	55	520
92. Pneumonia	111	90	76	62	59	33	20	17	22	32	42	59	623
93. Pleurisy	1	2	1	3	1	....	....	....	2	2	1	1	14
94. Pulmonary congestion, pulmonary apoplexy	5	6	4	4	5	1	5	5	2	1	3	5	46

TABLE XII (Continued)—*Number of Deaths from All Causes During the Year 1913.*

DISEASES	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
95. Gangrene of the lung	1	....	1	....	....	1	....	....	....	....	....	....	3
96. Asthma	....	1	3	....	....	2	1	....	1	2	1	6	17
97. Pulmonary emphysema	1	1	....	....	....	....	....	1	....	....	1	....	4
98. Other diseases of the respiratory system, tuberculosis excepted	4	....	4	4	1	2	1	....	1	2	1	1	21
V—*Diseases of the Digestive System.*													
99. Diseases of the mouth and annexa	....	....	....	....	1	1	....	1	....	....	....	....	3
100. Diseases of the pharynx	....	1	....	1	2	2	....	....	1	2	....	1	10
101. Diseases of the oesophagus	2	....	....	....	....	....	1	....	....	1	....	1	5
102. Ulcer of the stomach	2	1	....	....	2	....	2	2	4	2	....	7	22
103. Other diseases of the stomach, cancer excepted	3	7	4	7	8	8	6	2	5	4	8	6	68
104. Diarrhoea and enteritis (under 2 years)	9	6	16	11	22	66	184	108	75	32	16	13	558
105. Diarrhoea and enteritis (2 years and over)	4	3	8	4	4	6	17	17	6	5	5	4	83
106. Ankylostomiasis	....	....	....	....	....	....	....	....	....	....	....	....	......
107. Intestinal parasites	....	....	....	....	....	....	....	....	....	....	....	....	......
108. Appendicitis and typhlitis	5	2	3	4	8	9	7	3	3	8	6	5	63
109. Hernias, intestinal obstructions	10	7	8	9	13	9	14	7	12	11	11	7	118
110. Other diseases of the intestines	2	....	3	....	....	1	3	2	3	2	....	2	18
111. Acute yellow atrophy of the liver	1	....	....	....	2	....	....	....	....	1	....	....	4
112. Hydatid tumor of the liver	....	....	....	....	....	....	....	....	....	....	....	....	......
113. Cirrhosis of the liver	7	7	10	13	5	9	4	4	7	9	4	4	83

114. Biliary calculi	....	1	1	2	2	1	3	3	1	....	....	....	14
115. Other diseases of the liver	....	2	3	1	....	2	2	2	3	2	1	1	19
116. Diseases of the spleen	....	....	....	....	....	....	....	....	....	....	....	....	......
117. Simple peritonitis (nonpuerperal)	4	4	2	....	1	2	2	3	2	1	1	2	24
118. Other diseases of the digestive system, cancer and tuberculosis excepted	1	1	1	....	....	....	....	....	1	....	....	1	5
VI—Nonvenereal Diseases of the Genito-Urinary System and Annexa.													
119. Acute nephritis	11	9	22	11	10	12	13	6	11	9	8	16	138
120. Bright's disease	94	85	79	92	84	82	55	65	56	72	58	80	902
121. Chyluria	1	2	....	....	....	....	....	....	....	....	....	....	3
122. Other diseases of the kidneys and annexa	1	1	3	2	2	7	2	1	....	....	1	....	20
123. Calculi of the urinary passages	....	....	1	....	....	....	2	1	....	....	....	....	4
124. Diseases of the bladder	1	2	1	2	1	....	....	....	1	....	....	....	8
125. Other diseases of the urethra, urinary abscess, etc	....	....	....	....	....	....	....	1	....	....	....	....	1
126. Diseases of the prostate	1	....	3	2	2	1	3	1	1	2	2	....	18
127. Nonvenereal diseases of the male genital organs	....	....	....	1	....	....	1	....	....	....	....	....	2
128. Uterine haemorrhage (nonpuerperal)	....	....	....	....	....	....	....	....	....	....	....	1	1
129. Uterine tumor (noncancerous)	....	1	3	2	....	....	1	....	....	1	....	2	10
130. Other diseases of the uterus	1	....	....	....	1	....	....	....	....	2	....	....	4
131. Cysts and other tumors of the ovary	....	....	....	....	1	1	....	....	1	....	1	....	4
132. Salpingitis and other diseases of the female genitals	1	....	....	1	....	1	1	2	....	2	2	1	11
133. Nonpuerperal diseases of the breast, cancer excepted	....	....	....	....	....	....	....	....	....	....	....	....	......
VII—The Puerperal State.													
134. Accidents of pregnancy	....	2	1	....	1	2	1	5	1	1	....	1	15
135. Puerperal haemorrhage	....	....	1	....	2	1	....	....	2	1	....	....	7

TABLE XII (Continued)—*Number of Deaths from All Causes During the Year 1913.*

DISEASES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
136. Other accidents of labor	1	1	....	....	2	1	....	....	....	2	1	....	8
137. Puerperal septichaemia	4	3	3	2	8	10	5	3	1	1	4	5	49
138. Puerperal albuminuria and convulsions	1	7	6	....	6	1	2	2	2	2	1	3	33
139. Puerperal phlegmasia, alba dolens, embolus, sudden death	....	....	1	....	1	....	....	....	....	....	....	2	4
140. Following childbirth, not otherwise defined	....	....	....	....	....	....	....	....	....	....	....	....	......
141. Puerperal diseases of the breast	....	....	....	....	....	....	....	....	....	....	....	....	......
VIII—*Diseases of the Skin and of the Cellular Tissue.*													
142. Gangrene	1	4	2	....	2	3	1	....	1	1	1	....	16
143. Furuncle	....	....	....	....	....	....	2	....	1	....	....	....	3
144. Acute abscess	....	....	1	2	....	1	1	1	1	1	....	2	10
145. Other diseases of the skin and annexa	....	....	....	....	1	....	....	....	....	....	1	....	2
IX—*Diseases of the Bones and of the Organs of Locomotion.*													
146. Diseases of the bones, tuberculosis excepted.	1	2	....	1	1	3	3	3	....	3	1	1	19
147. Diseases of joints, tuberculosis and rheumatism excepted	....	....	....	....	....	....	....	....	....	....	....	1	1
148. Amputations	....	....	....	....	....	....	....	....	....	....	....	....	......
149. Other diseases of the organs of locomotion	....	....	....	....	1	....	....	....	....	....	....	....	1

X—*Malformations.*													
150. Congenital malformations (stillbirths not included)	3	7	5	2	2	8	4	3	3	4	6	6	53
XI—*Diseases of Early Infancy.*													
151. Congenital debility, icterus and sclerema	42	43	39	47	53	53	59	61	68	56	55	54	630
152. Other diseases peculiar to early infancy	10	9	6	11	19	11	16	15	10	6	7	8	128
153. Lack of care	....	....	....	....	1	....	....	....	....	....	....	....	1
XII—*Old Age.*													
154. Senility	29	12	22	18	20	13	10	9	6	9	11	7	166
XIII—*Affections Produced by External Causes.*													
155. Suicide by poison	1	3	....	2	2	8	2	2	4	4	....	2	30
156. Suicide by asphyxia	5	3	2	1	2	1	5	3	2	....	5	6	35
157. Suicide by hanging or strangulation	....	3	1	....	2	....	3	....	1	1	3	....	14
158. Suicide by drowning	....	....	1	....	1	....	....	....	1	....	1	1	5
159. Suicide by firearms	....	2	4	4	1	2	....	2	2	....	4	1	22
160. Suicide by cutting or piercing instruments	2	....	....	1	....	....	2	1	....	....	1	1	8
161. Suicide by jumping from a high place	....	....	....	....	1	1	....	....	....	....	....	2	4
162. Suicide by crushing	....	....	....	....	....	....	....	....	....	....	....	....	......
163. Suicide by other means	....	....	....	....	....	....	....	....	....	....	....	....	......
164. Poisoning by food	....	....	3	....	1	2	2	....	....	2	....	1	11
165. Other acute poisonings	....	3	2	1	1	....	....	1	....	1	....	....	9
166. Conflagration	1	....	....	....	....	....	1	....	....	....	1	2	5
167. Burns (conflagration excepted)	3	8	8	8	3	5	11	....	2	1	9	6	64
168. Absorption of deleterious gases, conflagration excepted	3	4	1	....	3	2	1	1	1	2	3	4	25
169. Accidental drowning	2	2	5	10	4	4	8	5	1	11	4	2	58
170. Traumatism by firearms	....	....	1	....	....	....	1	....	....	....	1	....	3

TABLE XII (Continued)—*Number of Deaths from All Causes During the Year* 1913.

DISEASES.	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Total
171. Traumatism by cutting or piercing instruments	....	....	....	....	....	....	....	....	....	....	....	....	......
172. Traumatism by fall	3	8	6	6	7	11	10	9	8	5	7	6	86
173. Traumatism in mines and quarries	....	....	....	....	....	....	....	....	....	....	....	....	......
174. Traumatism by machines	....	1	4	....	3	....	....	1	2	1	2	....	14
175. Traumatism by other crushing (vehicles. railroad, landslides, etc.)	9	6	9	7	7	7	12	8	8	9	7	7	96
176. Injuries by animals	....	....	....	....	1	....	....	....	....	....	....	....	1
177. Starvation	....	1	....	....	....	....	....	....	....	....	....	....	1
178. Excessive cold	....	....	1	....	....	....	....	....	....	....	....	....	1
179. Effects of heat	....	....	....	....	....	4	6	2	....	....	....	....	12
180. Lightning	....	....	....	....	....	....	....	....	....	....	....	....	......
181. Electricity (lightning excepted)	....	....	....	1	....	....	....	1	....	....	....	1	3
182. Homicide by firearms	1	1	....	....	1	....	2	2	....	3	3	3	16
183. Homicide by cutting or piercing instruments	....	1	1	2	....	....	1	....	1	1	1	1	9
184. Homicide by other means	3	1	....	1	2	1	3	1	....	2	....	2	16
185. Fractures (cause not specified)	....	1	1	....	....	....	....	....	....	....	....	....	2
186. Other external violence	2	....	15	4	3	....	....	2	1	2	2	....	31

XIV—*Ill-Defined Diseases.*													
187. Ill-defined organic disease	....	....	....	....	....	....	....	....	....	2	....	....	2
188. Sudden death	....	....	....	....	....	....	....	....	....	....	....	....	......
189. Cause of death not specified or ill-defined	3	3	3	4	3	5	12	5	2	1	2	2	45
Total	935	914	955	837	902	831	946	792	703	748	732	873	10,168

TABLE XIII—*Number of Deaths from Tuberculosis, During the Year* 1913,

AGES.	Pulmonary Tuberculosis.					Other forms of Tuberculosis.				
	White.		Colored.		Total.	White.		Colored.		Total.
	M.	F.	M.	F.		M.	F.	M.	F.	
Under 3 months........	3	1	2	....	6	....	....	....	....	.....
Bet. 3 and 12 months...	4	3	1	2	10	5	8	7	3	23
Bet. 1 and 2 yrs........	....	1	2	2	5	9	8	5	4	26
Bet. 2 and 3 yrs........	....	1	....	2	3	1	3	2	4	10
Bet. 3 and 4 yrs........	....	....	3	....	3	1	2	....	2	5
Bet. 4 and 5 yrs........	1	....	....	3	4	2	2	....	1	5
Total under 5 yrs...	8	6	8	9	31	18	23	14	14	69
Bet. 5 and 9 yrs....	....	3	5	3	11	2	6	4	9	21
Bet. 10 and 14 yrs....	2	1	....	5	8	2	1	1	....	4
Bet. 15 and 19 yrs....	9	17	11	21	58	7	2	2	1	12
Bet. 20 and 24 yrs....	35	46	22	22	125	2	6	4	2	14
Bet. 25 and 29 yrs....	41	34	22	24	121	6	5	2	1	14
Bet. 30 and 34 yrs....	46	26	22	19	113	6	6	5	4	21
Bet. 35 and 39 yrs....	46	33	16	16	111	4	4	....	1	9
Bet. 40 and 44 yrs....	37	21	29	12	99	3	2	4	2	11
Bet. 45 and 49 yrs....	39	14	17	8	78	2	3	....	1	6
Bet. 50 and 54 yrs....	21	14	9	5	49	5	1	2	2	10
Bet. 55 and 59 yrs....	23	6	4	3	36	1	....	....	....	1
Bet. 60 and 64 yrs....	14	11	7	3	35	2	....	....	....	2
Bet. 65 and 69 yrs....	13	7	3	....	23	....	1	....	....	1
Bet. 70 and 74 yrs....	5	7	....	1	13	....	2	....	....	2
Bet. 75 and 79 yrs....	1	3	1	....	5	....	....	....	1	1
Bet. 80 and 84 yrs....	....	1	....	....	1	....	....	....	....	.....
Bet. 85 and 89 yrs....	....	....	....	....	.....	....	....	....	....	.....
Bet. 90 and 94 yrs....	....	....	....	....	.....	....	....	....	....	.....
Bet. 95 and 99 yrs....	....	....	....	....	.....	....	....	....	....	.....
Bet. 100 and 104 yrs....	....	....	....	....	.....	....	....	....	....	.....
Bet. 105 and 109 yrs....	....	....	....	....	.....	....	....	....	....	.....
110 years...............	....	....	....	....	.....	....	....	....	....	.....
Unknown age...........	....	....	....	....	.....	....	....	....	....	.....
Total...............	340	250	176	151	917	60	62	38	38	198

Bronchitis Broncho-Pneumonia and Pneumonia, According to Age, Sex and Color.

Bronchitis.					Broncho-Pneumonia.					Pneumonia.				
White.		Colored.		Total.	White.		Colored.		Total.	White.		Colored.		Total.
M.	F.	M.	F.		M.	F.	M.	F.		M.	F.	M.	F.	
12	2	3	6	23	23	21	14	16	74	7	3	5	3	18
6	7	11	3	27	38	39	26	25	128	24	7	11	7	49
4	2	1	5	12	36	21	18	15	90	19	8	7	7	41
3	2	1	3	9	8	10	7	5	30	6	7	5	1	19
....	1	....	....	1	4	4	2	4	14	6	2	....	....	8
....	....	....	....	.....	2	....	1	2	5	1	3	4	....	8
25	14	16	17	72	111	95	68	67	341	63	30	32	18	133
....	1	2	1	4	7	2	3	1	13	8	4	2	5	19
....	....	....	1	1	2	2	1	1	6	2	3	1	6	12
....	....	....	....	.....	....	....	....	....	.....	5	....	1	7	13
....	....	....	....	.....	2	....	2	1	5	6	3	8	10	27
1	....	1	....	2	....	2	1	1	4	17	6	8	8	39
1	....	....	....	1	4	2	2	....	8	14	8	3	3	28
1	....	....	1	2	2	1	....	2	5	6	5	12	6	29
....	....	1	....	1	1	....	2	....	3	18	10	12	6	46
2	1	....	....	3	6	1	3	....	10	10	4	6	3	23
....	....	3	3	6	3	3	1	3	10	10	9	7	5	31
1	8	....	1	10	1	7	1	2	11	12	10	7	7	36
4	4	....	....	8	5	6	2	3	16	14	19	7	3	43
7	7	1	1	16	8	9	1	3	21	10	27	3	1	41
6	9	....	....	15	10	16	1	2	29	11	24	3	1	39
6	6	1	....	13	1	9	2	....	12	5	15	2	2	24
1	7	....	....	8	4	13	....	....	17	8	9	1	1	19
3	....	....	1	4	....	5	....	....	5	....	4	....	....	4
1	1	....	....	2	....	3	....	1	4	2	4	....	....	6
....	....	....	....	.....	....	....	....	....	.....	1	....	....	....	1
....	....	....	....	.....	....	....	....	....	.....	....	....	....	....	.....
....	....	....	....	.....	....	....	....	....	.....	....	....	....	....	.....
....	....	....	....	.....	....	....	....	....	.....	....	....	....	....	.....
....	....	....	....	.....	....	....	....	....	.....	....	....	....	....	.....
59	58	25	26	168	167	176	90	87	520	222	194	115	92	623

TABLE XIV—*Showing Deaths Due to Zymotic Diseases, with Percentage of the Deaths to Total Mortality, for the Years* 1875 *to* 1913, *Inclusive.*

YEARS.	Diphtheria and Croup.	Scarlet Fever.	Typhoid Fever.	Whooping Cough.	Measles.	Smallpox.	Total Zymotic Diseases.	Total Deaths from All Causes.	Percentage of Zymotic Deaths to Total Mortality.
1875	237	519	187	78	15	1	1,037	7,258	14.29
1876	249	562	176	39	16	......	1,042	7,498	13.90
1877	557	447	211	303	151	......	1,669	7,910	21.10
1878	452	141	176	63	11	1	844	6,733	12.54
1879	484	367	167	80	43	1	1,142	7,618	13.68
1880	466	400	196	148	12	1	1,223	8,043	15.20
1881	881	215	197	93	75	11	1,472	8,816	16.70
1882	929	179	165	43	71	551	1,938	8,923	21.72
1883	793	334	126	59	130	633	2,074	9,380	22.11
1884	470	104	151	120	228	1	1,074	8,293	12.95
1885	400	68	155	63	16	......	702	8,153	8.61
1886	318	32	150	91	201	1	793	8,339	9.49
1887	302	36	156	98	85	......	677	8,372	8.09
1888	216	44	161	112	176	......	709	8,936	7.93
1889	208	71	191	54	11	......	535	8,703	6.15
1890	319	42	247	100	248	......	956	10,198	9.37
1891	394	128	150	103	16	......	791	10,073	7.85
1892	428	258	193	32	120	......	1,031	10,582	9.74
1893	210	36	224	60	39	......	569	9,554	5.96
1894	231	85	222	112	3	......	653	9,486	6.88
1895	310	59	173	68	68	......	678	10,301	6.58
1896	281	31	188	87	27	......	614	9,919	6.19

1897	360	53	189	42	16	......	660	9,329	7.07
1898	412	46	189	64	48	......	759	10,385	7.30
1899	312	24	153	19	5	1	514	10,152	5.06
1900	279	20	189	47	24	......	559	10,700	5.22
1901	171	11	141	63	3	......	389	10,479	3.71
1902	130	37	220	95	41	7	530	10,253	5.17
1903	160	84	189	64	77	2	576	10,141	5.68
1904	115	143	199	24	6	4	491	10,818	4.54
1905	102	33	197	64	67	......	463	10,605	4.33
1906	115	47	183	151	14	......	510	10,753	4.74
1907	80	15	230	17	74	......	416	11,190	3.72
1908	64	70	180	41	17	......	372	10,435	3.56
1909	76	25	136	117	54	......	408	10,376	3.93
1910	64	49	235	83	19	......	450	10,753	4.19
1911	68	44	154	48	77	......	391	10,404	3.76
1912	93	23	136	33	5	......	290	10,441	2.78
1913	81	39	135	41	118	......	414	10,168	4.07

TABLE XV—*Showing Number of Cases Reported, and Mortality Therefrom, of Principal Zymotic Diseases During Years 1894 to 1913, Inclusive, with Percentage of Deaths to Cases Reported Each Year.*

YEARS.	Diphtheria and Croup.			Scarlet Fever.			Measles.			Varicella.		
	Cases Reported.	Deaths Reported.	Percentage of Deaths.	Cases Reported.	Deaths Reported.	Percentage of Deaths.	Cases Reported.	Deaths Reported.	Percentage of Deaths.	Cases Reported.	Deaths Reported.	Percentage of Deaths.
1894............	409	231	56.48	999	85	8.50	98	3	3.06	53	1	1.88
1895............	629	310	49.28	775	59	7.61	2,332	68	2.91	40	....	....
1896............	653	281	43.03	694	31	4.46	1,002	27	2.69	68	2	2.94
1897............	1,620	460	22.22	928	53	5.71	659	16	2.42	47	1	2.12
1898............	2,077	412	19.83	588	46	7.82	1,419	48	3.38	119	....	....
1899............	1,780	312	17.52	434	24	3.52	591	5	0.84	183	....	....
1900............	1,858	279	15.01	402	20	4.97	2,770	24	0.86	192	....	....
1901............	1,169	171	14.62	391	11	2.81	466	3	0.64	199	1	0.50
1902............	972	130	13.37	481	37	7.69	1,909	41	2.10	331	....	....
1903............	1,461	160	10.95	1,224	84	6.86	2,203	77	3.50	256	....	....
1904............	1,272	115	9.04	1,222	143	11.79	344	6	1.74	334	1	0.30
1905............	962	102	10.60	615	33	5.37	2,437	67	2.75	234	1	0.43
1906............	1,172	115	9.81	577	47	8.15	575	14	2.43	195	4	2.05
1907............	867	80	9.23	436	15	3.44	2,268	74	3.26	306	....	....
1908............	848	64	7.55	1,262	70	5.55	1,895	17	0.90	403	....	....
1909............	756	76	10.05	456	25	5.48	2,999	54	1.80	445	....	....
1910............	793	64	8.07	1,173	49	4.18	1,137	19	1.67	380	1	0.26
1911............	1,041	68	6.53	1,118	44	3.94	3,567	77	2.15	495	1	0.20
1912............	1,039	93	8.99	750	23	3.07	624	5	0.80	488	1	0.20
1913............	1,309	81	6.18	1,138	39	3.43	5,724	118	2.06	595	1	0.17

TABLE XV (Continued)—*Showing Number of Cases Reported, and Mortality Therefrom, of Principal Zymotic Diseases During Years 1894 to 1913, Inclusive, with Percentage of Deaths to Cases Reported Each Year.*

YEARS.	Whooping Cough			Mumps.			Typhoid Fever.			Tuberculosis.		
	Cases Reported.	Deaths Reported.	Percentage of Deaths.	Cases Reported.	Deaths Reported.	Percentage of Deaths.	Cases Reported.	Deaths Reported.	Percentage of Deaths.	Cases Reported.	Deaths Reported.	Percentage of Deaths.
1894	320	112	35.00	80	1	1.25	......	222	......	......	1,106	......
1895	171	68	39.76	62	2	3.22	260	173	66.53	......	1,141	......
1896	266	87	32.87	73	1	1.36	472	188	39.83	......	1,122	......
1897	213	42	19.71	132	......	......	363	189	52.06	......	1,047	......
1898	335	64	19.10	22	......	......	545	189	34.68	......	1,061	......
1899	129	19	15.83	26	......	......	462	153	33.11	......	974	......
1900	239	47	19.66	160	......	......	871	189	21.70	......	1,056	......
1901	257	63	24.51	214	1	0.47	792	141	17.80	274	1,274	385.40
1902	395	95	24.05	71	1	1.40	1,086	220	20.26	384	1,297	331.77
1903	233	64	27.47	247	......	......	768	189	24.61	356	1,336	364.33
1904	78	24	30.77	122	3	2.46	916	199	21.72	551	1,514	242.50
1905	271	64	23.61	42	2	0.24	1,019	197	19.33	478	1,466	316.74
1906	465	151	32.47	57	......	......	1,215	183	15.06	715	1,489	205.03
1907	117	17	14.53	756	2	0.26	1,417	230	16.23	733	1,481	203.14
1908	238	41	17.23	49	......	......	1,426	180	12.62	712	1,413	208.00
1909	685	117	17.08	38	......	......	1,069	136	12.72	745	1,438	189.67
1910	606	83	13.70	249	......	......	1,891	235	12.43	919	1,396	156.47
1911	343	48	14.00	590	1	0.17	1,201	154	12.82	3,292	1,388	42.40
1912	408	33	8.08	53	......	......	1,083	136	12.56	1,712	1,189	81.07
1913	290	41	14.10	161	1	0.62	1,163	135	11.60	2,248	917	52.81
										1,541		59.50

TABLE XVI—*Showing the Number of Deaths Annually, Due to Typhoid Fever, from the Year 1888 to 1913, Inclusive, According to Sex and Color.*

YEARS.	Estimated Population.	White.			Colored.			Total Males.	Total Females.	Total Deaths.
		Males.	Females.	Totals.	Males.	Females.	Totals.			
1888	395,899	88	90	178	80	14	94	168	104	272
1889	404,498	88	93	181	23	20	43	111	113	224
1890	413,671	135	109	244	26	31	57	161	140	301
1891	426,917	82	75	157	13	19	32	95	94	189
1892	440,163	90	102	192	19	15	34	100	117	226
1893	453,409	108	120	228	11	16	27	119	136	255
1894	466,665	103	104	207	23	27	50	126	131	257
1895	479,907	82	75	157	21	14	35	103	89	192
1896	493,147	93	81	174	16	14	30	109	95	204
1897	506,398	99	76	175	20	14	34	119	90	209
1898	541,000	96	62	158	19	24	43	115	86	201
1899	541,000	67	62	119	18	16	34	85	68	153
1900	509,369	83	69	152	21	16	37	104	85	189
1901	514,385	66	44	110	11	20	31	77	64	141
1902	519,401	99	78	172	24	24	48	123	97	220
1903	524,417	79	58	137	26	26	52	105	84	189
1904	529,433	91	67	158	26	15	41	117	82	199
1905	534,449	85	73	158	23	16	49	108	89	197

1906	539,465	83	58	141	25	17	42	108	75	183
1907	544,481	112	68	180	27	23	50	139	91	230
1908	549,497	84	68	152	19	9	28	103	77	180
1909	554,513	67	40	107	18	11	29	85	51	136
1910	559,529	101	91	192	23	20	43	124	111	235
1911	564,545	79	45	124	15	15	30	94	60	154
1912	569,561	60	51	111	12	13	25	111	25	136
1913	574,577	51	41	92	17	26	43	92	43	135

TABLE XVII—*Showing Comparison of Deaths Due to All Causes and Those to Communicable Diseases, from 1875 to 1913, Inclusive.*

YEARS.	Population.	Typhoid Fever.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Pseudo-Membranous Croup.	Croup.	Dysentery.	Diarrhœa and Enteritis, Under Five Years.*	Children Under Five Years of Age.	Total Mortality from All Causes, Exclusive of Still Births.	Death Rate.	Still Births.	Rate of Still Births to 1,000 Inhabitants.
1875............	267,354	187	15	519	78	101	136	38	643	3,429	7,258	22.33	560	1.70
1876............	267,354	176	16	562	39	157	92	51	702	3,640	7,498	22.38	588	1.75
1877............	311,275	211	151	447	393	424	133	49	614	4,029	7,910	22.60	538	1.53
1878............	318,182	176	11	141	63	303	149	41	343	2,882	6,733	18.44	655	1.79
1879............	325,139	167	42	367	80	298	186	60	475	3,385	7,618	19.30	620	1.57
1880............	332,313	196	12	400	148	293	173	57	503	3,602	8,043	20.41	636	1.61
1881............	339,649	197	74	215	93	639	242	56	558	3,919	8,816	22.37	651	1.65
1882............	347,142	165	71	179	43	707	222	62	582	3,755	8,923	21.81	677	1.71
1883............	354,832	126	130	334	59	591	201	52	608	4,062	9,380	22.93	701	1.71
1884............	362,668	151	16	68	63	252	148	43	723	3,643	8,293	20.77	746	1.82
1885............	370,696	155	16	68	63	252	148	60	682	3,228	8,153	19.55	650	1.59
1886............	378,993	150	201	32	91	190	128	84	704	3,565	8,339	19.98	718	1.72
1887............	387,300	156	85	36	98	149	153	137	786	3,477	8,372	19.16	669	1.60
1888............	395,899	161	176	44	112	118	98	167	805	3,881	8,936	17.87	694	1.63
1889............	404,498	191	11	71	54	155	53	156	994	3,505	8,703	17.40	784	1.84
1890............	413,671	247	248	42	100	274	45	212	859	4,117	10,198	22.41	800	1.76
1891............	426,917	150	16	128	103	350	44	118	852	3,910	10,073	22.14	811	1.78
1892............	440,163	193	120	258	32	381	47	109	1,091	4,443	10,582	23.25	813	1.78
1893............	453,429	224	39	36	60	185	25	62	762	3,604	9,554	20.99	770	1.60
1894............	466,655	222	3	85	112	198	33	72	793	3,761	9,486	20.84	721	1.58

1895	479,907	173	68	59	68	265	45	70	637	4,026	10,301	20.76	666	1.30
1896	493,147	188	27	31	87	249	32	82	526	3,728	9,919	19.60	678	1.33
1897	506,398	189	16	53	42	347	13	57	830	3,510	9,329	18.43	706	1.39
1898	541,000	189	48	46	64	362	50	82	720	3,939	10,385	19.19	748	1.38
1899	541,000	153	5	24	19	299	13	57	703	3,319	10,152	18.76	706	1.30
1900	509,369	189	24	20	47	267	12	77	848	3,695	10,700	20.50	682	1.34
1901	514,385	141	3	11	63	104	7	49	726	3,391	10,479	19.77	672	1.30
1902	519,401	220	41	37	95	121	9	78	695	3,327	10,253	18.99	659	1.27
1903	524,417	189	77	84	64	152	8	40	550	3,102	10,141	18.60	741	1.41
1904	529,433	199	6	143	24	114	1	54	671	3,155	10,818	19.70	710	1.34
1905	534,449	197	67	33	64	99	6	44	751	3,465	10,695	19.32	814	1.52
1906	539,465	183	14	47	151	111	4	37	623	3,319	10,753	19.12	826	1.53
1907	544,481	230	74	15	17	78	2	48	747	3,333	11,190	19.56	794	1.46
1908	549,497	180	17	70	41	63	1	35	591	2,967	10,435	18.19	811	1.48
1909	554,513	136	54	25	117	74	2	33	562	3,071	10,376	17.73	817	1.47
1910	559,529	235	19	49	83	64	......	31	598	2,891	10,753	18.33	822	1.47
1911	564,545	154	77	44	48	68	......	25	568	2,714	10,404	17.54	712	1.26
1912	569,561	136	5	23	34	93	......	17	501	2,723	10,441	18.33	689	1.28
1913	574,577	135	118	39	41	81	......	21	558	2,732	10,168	17.70	909	1.58

*The figures on diarrhœal diseases in children under five years of age are not complete, for the reason that prior to the year 1882 only those dying of "cholera infantum" were so classified, and from and including the year 1906, to conform with the International System of Classification, only those under two (2) years of age are included.

NOTE—In the above table the item "population," which is estimated, has been changed from and including the year 1900, so as to conform with the figures used by the United States Census Bureau. Previous to the census of 1910 the population for the inter-censal years, from 1900 on, was estimated on the assumption that the same, or more, average increase each year was maintained as was the previous decade; but the census for 1910 showed differently, and, therefore, the estimates of population and the death rate for each year has been adjusted accordingly

FINANCIAL STATEMENT

BY THE SECRETARY

Financial Statement.

Original Appropriation, Salaries		$131,780 00
Special appropriation for vaccine physicians		3,600 00
		$135,380 00

EXPENDITURES.

Commissioner of Health, James Bosley, M. D., 20 days	$192 00	
Commissioner of Health, Nathan R. Gorter, M. D., 11 months, 11 days	3,217 75	
Assistant Commissioner of Health, C. Hampson Jones, M. D.	3,000 00	
Health Warden, Oscar L. Long, M. D.	900 00	
Health Warden, H. E. Laroque, M. D.	900 00	
Health Warden, Augustine Palmisano, M. D.	900 00	
Health Warden, H. K. Gorsuch, M. D.	900 00	
Health Warden, J. E. Heard, M. D.	900 00	
Health Warden, J. T. Spicknall, M. D.	900 00	
Health Warden, A. L. Retalliata, M. D.	900 00	
Health Warden, J. W. France, M. D.	900 00	
Health Warden, C. T. Buckner, M. D.	900 00	
Health Warden, Bernard Wess, M. D.	900 00	
Health Warden, C. E. Downes, M. D.	900 00	
Health Warden, E. A. Munoz, M. D.	900 00	
Health Warden, H. H. Von Dreele, M. D.	900 00	
Health Warden, E. K. Ballard, M. D.	900 00	
Health Warden, C. Frank Jones, M. D.	900 00	
Health Warden, G. A. Thiede, M. D.	900 00	
Health Warden, George W. Hemmeter, M. D.	900 00	
Health Warden, Fred H. Vinup, M. D.	900 00	
Health Warden, J. Harry Ullrich, M. D.	900 00	
Health Warden, Wm. A. Knell, M. D.	900 00	
Health Warden, A. E. Muse, M. D.	900 00	
Health Warden, J. E. Poulton, M. D.	900 00	
Amounts carried forward	$26,210 63	$135,380 00

Amounts brought forward	$26,210 63	$135,380 00
Health Warden, C. P. Erken-Brack, M. D.	900 00	
Health Warden, Charles B. Whetle, M. D.	900 00	
Secretary, M. Harry Laib	1,745 84	
Clerk to Bureau of Vital Statistics, Chas. Busick	1,200 00	
Statistician, Howard A. Moore	1,175 84	
Permit Clerk, Harry C. Andrews	1,000 00	
Permit Clerk, Robert R. Krauter	1,000 00	
Clerk to Asst. Commissioner, C. Victor Dennis.	900 00	
Registrar's Clerk, George C. Wedderburn	900 00	
Complaint Clerk, Thomas Burgess	900 00	
Index Clerk, Maurice Wm. Joint, 11 months	825 00	
Index Clerk, James J. O'Meara, 27 days	66 42	
Medical Examiner, N. G. Keirle, M. D.	1,500 00	
Asst. Medical Examiner, H. G. Branham, M. D.	500 00	
Throat Inspector, W. P. Stubbs, M. D.	500 00	
Throat Inspector, B. P. Herzog, M. D.	500 00	
Bacteriologist, Wm. Royal Stokes, M. D.	1,787 50	
Asst. Bacteriologist, F. W. Hachtel, M. D.	1,500 00	
Asst. Bacteriologist, Wm. J. Schmitz, M. D.	1,200 00	
Asst. Bacteriologist, Raymond Freas, A. B.	1,000 00	
Asst. Bacteriologist (water work), Fred Berger.	480 00	
Clerk to Bacteriological Laboratory, Harry C. Campbell	947 92	
Collector for Bacteriological Laboratory, Edward F. Kelly	900 00	
Bacteriological Laboratory Assistant, G. Harry Rush	900 00	
Laboratory Assistant, George Considine, 15 days.	10 00	
Laboratory Diener, Albert League, 8 months, 15 days	170 00	
Laboratory Diener, John Thomas, 1 month, 7½ days	25 00	
Laboratory Diener, Harry J. Maloney	297 50	
Laboratory Diener, Lee Clarke, 1 month	20 00	
Laboratory Diener, Wm. C. McCormick	240 00	
Chemist, Fred C. Blanck, Ph. D.	2,000 00	
Assistant Chemist, C. Clifton Howes	1,200 00	
Assistant Chemist, Harry B. Siegmund	796 67	
Amounts carried forward	$54,198 32	$135,380 00

Amounts brought forward	$54,198 32	$135,380 00
Assistant Chemist, R. S. Craig, B. S., 11½ months	690 00	
Chemical Laboratory Assistant, Charles McLaughlin	398 34	
Chemical Laboratory Assistant, George Considine, 1 month	30 00	
Chemical Laboratory Assistant, W. F. Harrison, 3 months	90 00	
Chemical Laboratory Assistant, Eugene D. Thomas, 7 months	210 00	
Chemical Laboratory Clerk, Michael Gahan	900 00	
Stenographer and Clerk, H. L. Carman, 11½ months	690 00	
Chief Food Inspector, Wm. P. Palmer	1,200 00	
Dairy Farm Inspector, Harry P. Carey, D. V. S., 11½ months	1,035 00	
Dairy Farm Inspector, Robert H. Wempe, 11½ months	1,035 00	
Dairy Farm Inspector, John S. Fulton, Jr., A. B., 11½ months	1,035 00	
Food Inspector, George Belzner	900 00	
Food Inspector, Phillip T. Meagher	900 00	
Food Inspector, Charles R. Roehner	900 00	
Food Inspector, B. Kerns	900 00	
Food Inspector, Joseph Sapp	900 00	
Food Inspector, John Miller	900 00	
Food Inspector, George J. Fischer	900 00	
Food Inspector, George H. Lentz	900 00	
Food Inspector, Michael J. Buckley, 2 months	150 00	
Food Inspector, Carter Hall, 10 months	750 00	
Food Inspector, John Behr	900 00	
Food Inspector, George A. Brady	900 00	
Food Inspector, E. B. Christopher, 11½ months	862 50	
Inspector of Bakeries, Rudolph Weber	900 00	
Inspector of Cow Stables, George F. Schultz	900 00	
Stenographer, Bertha M. Muller	720 00	
Telephone Operator, Ola Tracey	480 00	
Amounts carried forward	$75,274 16	$135,380 00

Amounts brought forward	$75,274 16	$135,380 00
Chief Tenement House Inspector, Daniel W. Smith, M. D.	1,200 00	
Tenement House Inspector, John A. Kelly	900 00	
Tenement House Inspector, Abraham Lasch	900 00	
Chief Plumbing Inspector, C. I. Putts, Jr.	1,595 84	
Asst. Plumbing Inspector, Wm. Odenhal, 6 months	450 00	
Asst. Plumbing Inspector, John A. Truelove, 6 months	450 00	
Asst. Plumbing Inspector, John J. Gessler	900 00	
Asst. Plumbing Inspector, Thomas L. Sullivan	900 00	
Asst. Plumbing Inspector, Henry H. Smith	900 00	
Asst. Plumbing Inspector, Robert A. Reed	900 00	
Asst. Plumbing Inspector, Wm. E. Dorsey	900 00	
Asst. Plumbing Inspector, Michael J. Gorman	900 00	
Asst. Plumbing Inspector, Wm. C. Frostburg, 15 days	37 50	
Asst. Plumbing Inspector, Edward F. Forster, 11½ months	862 50	
Asst. Plumbing Inspector, Eugene R. Pruitt	900 00	
Asst. Plumbing Inspector, Joseph I. Curran	900 00	
Asst. Plumbing Inspector, J. O. Griffith	900 00	
Asst. Plumbing Inspector, Wm. J. Kneise	900 00	
Asst. Plumbing Inspector, Wm. J. Martin	900 00	
Asst. Plumbing Inspector, Charles F. Hagan, 11½ months	862 50	
Asst. Plumbing Inspector, Francis A. Ebberts, 11½ months	862 50	
Inspector of Drains, Lawrence C. Rosendale	900 00	
Chief Clerk to Plumbing Division, Frank B. Wood	995 84	
Clerk to Plumbing Division, Charles H. P. Coe	900 00	
Clerk to Plumbing Division, G. W. Snyder, 11½ months	862 50	
Clerk to Plumbing Division, Edward Hopkins, 11½ months	862 50	
Clerk to Plumbing Division, Robert T. Patterson, 11½ months	862 50	
Amounts carried forward	$98,678 34	$135,380 00

Amounts brought forward	$98,678 34	$135,380 00
Clerk to Plumbing Division, James E. Farrell, 10 months, 23 days	799 55	
Nuisance Clerk, Edward Thompson	900 00	
Superintendent of Fumigation, Wm. E. Woodall.	1,200 00	
Superintendent and Engineer of Morgue, August Ritmiller	1,200 00	
Fumigator, George W. Phillips	800 00	
Fumigator, Joseph Fitzsimmons	800 00	
Fumigator, Meyer Raitzyk	800 00	
Fumigator, Wm. M. Stanton	800 00	
Fumigator, H. G. Seidell, 10 months	666 60	
Fumigator, Frank H. Seidell, 2 months	133 40	
Chauffeur, Carroll McDermott, 11½ months	690 00	
Driver of Funeral Wagon, Thomas Gratton	720 00	
Driver of Funeral Wagon, Wm. H. Bucheimer	720 00	
Driver of Disinfecting Wagon, Thomas Morse	720 00	
Driver of Disinfecting Wagon, Thomas Reynolds	720 00	
Medical Examiner of Schools, H. Warren Buckler, M. D.	600 00	
Medical Examiner of Schools, I. R. Page, M. D., 10 months	500 00	
Medical Examiner of Schools, A. L. Fehsenfeld, M. D., 2 months	100 00	
Medical Examiner of Schools, Henry Kolb, M. D.	600 00	
Medical Examiner of Schools, A. K. Bond, M. D.	600 00	
Medical Examiner of Schools, R. A. Urquhart, M. D.	600 00	
School Nurse, Virginia B. Lorentz	600 00	
School Nurse, Marie A. Gorter	600 00	
School Nurse, Sally L. Jean, 10 months	500 00	
School Nurse, Olivia C. Dawson, 2 months	100 00	
School Nurse, Henrietta E. Knorr	600 00	
School Nurse, Agnes P. Kloman	600 00	
Statistical Clerk, Lucy I. Cowell	600 00	
Chief Tuberculosis Nurse, Ellen N. LaMotte, 5½ months	650 00	
Chief Tuberculosis Nurse, Eleanor Jones, 6½ months	550 00	
Tuberculosis Nurse, Elizabeth C. Lee	900 00	
Amounts carried forward	$119,047 89	$135,380 00

Amounts brought forward	$119,047 89	$135,380 00
Tuberculosis Nurse, Mary L. Kelly	900 00	
Tuberculosis Nurse, Lillian Oeligrath	900 00	
Tuberculosis Nurse, Jennie B. Newman	900 00	
Tuberculosis Nurse, Margaret Kennedy	900 00	
Tuberculosis Nurse, Mary Raab	900 00	
Tuberculosis Nurse, Geo. A. Hutton, 1½ months	112 50	
Tuberculosis Nurse, Sarah W. Crowsley, 3 months	225 00	
Tuberculosis Nurse, Eleanor Jones, 2 months	150 00	
Tuberculosis Nurse, Rebecca M. Coale, 5½ months	412 50	
Tuberculosis Nurse, Ida L. Lilly	900 00	
Tuberculosis Nurse, B. M. Stauffer	900 00	
Tuberculosis Nurse, L. M. Schroeder	900 00	
Tuberculosis Nurse, Johanna W. Tuve	900 00	
Tuberculosis Nurse, Ellen M. Hellier	900 00	
Tuberculosis Nurse, Frances W. Sprecher	900 00	
Tuberculosis Nurse, Clifford Geffchen, 10 months	750 00	
Tuberculosis Nurse, Luli Carter, 2 months	150 00	
Playground Nurse, Olivia C. Dawson, 2 months	150 00	
Playground Nurse, Virginia B. Lorentz, 2 months	150 00	
Extra Vaccine Physician, W. D. Olmsted, M. D., 30 days	150 00	
Extra Vaccine Physician, Charles P. Clautice, M. D., 30 days	150 00	
Extra Vaccine Physican, Wm. F. Skillman, M. D., 30 days	150 00	
Extra Vaccine Physician, T. J. Powers, M. D., 29 days	145 00	
Extra Vaccine Physician, F. O. Barrett, M. D., 30 days	150 00	
Extra Vaccine Physician, G. F. Hartzell, M. D., 30 days	150 00	
Extra Vaccine Physician, Frank J. Doyle, M. D., 26 days	130 00	
Extra Vaccine Physician, H. E. Wooden, M. D., 24 days	120 00	
Extra Vaccine Physician, Benjamin J. McCleary, M. D., 30 days	150 00	
Amounts carried forward	$132,342 89	$135,380 00

Amounts brought forward	$132,342 89	$135,380 00
Extra Vaccine Physician, J. A. Insley, M. D., 30 days	150 00	
Extra Vaccine Physician, Henry H. Weinberger, M. D., 30 days	150 00	
Extra Vaccine Physician, Jos. L. Valentine, M. D., 30 days	150 00	
Extra Vaccine Physician, John Wade, M. D., 30 days	150 00	
Extra Vaccine Physician, John Girdwood, M. D., 30 days	150 00	
Extra Vaccine Physician, L. J. Turlington, M. D., 30 days	150 00	
Extra Vaccine Physician, John L. Schweinberg, M. D., 9 days	45 00	
Extra Vaccine Physician, Henry E. Lee, M. D., 30 days	150 00	
Extra Vaccine Physician, Frank J. Sebald, M. D., 30 days	150 00	
Extra Vaccine Physician, Maurice Chideckel, M. D., 30 days	150 00	
Extra Vaccine Physician, John J. Morrissey, M. D., 30 days	150 00	
Extra Vaccine Physician, Henry C. Houck, M. D., 29 days	145 00	
Extra Vaccine Physcian, Edward E. Altvater, M. D., 30 days	150 00	
Extra Vaccine Physician, L. L. Lloyd, M. D., 30 days	150 00	
Extra Vaccine Physician, John W. Linthicum, M. D., 28 days	140 00	
Extra Vaccine Physician, Thomas A. Stevens, M. D., 23 days	115 00	
Extra Vaccine Physician, H. Young Westbrook, M. D., 1 day	5 00	
Extra Vaccine Physician, H. A. O'Neill, M. D., 2 days	10 00	
Total		134,602 89
Surplus of credit		$777 11
Balance to surplus, 1913		777 11

HEALTH DEPARTMENT EXPENSES.

ORIGINAL APPROPRIATION, Expenses	$3,395 00
June 14, credit Wm. G. Westenberger	40
June 14, credit Dr. R. A. Urquhart	40
June 25, credit Consolidated Gas Elec. Light and Power Co.	1 04
October 21, Board of Estimates (smallpox)	7,371 37
	$40,323 21

EXPENDITURES.

Fumigation, etc.	$3,642 02	
Car fare	2,582 39	
Advertising	27 25	
Subscriptions	246 86	
Sundry bills	3,028 07	
Coffins for poor	48 00	
Annual report, prnting, etc	693 95	
Morgue expenses	562 73	
Bacteriological laboratory	5,515 31	
Chemical laboratory	550 12	
Disinfectants	911 89	
Vaccine virus	6,674 50	
Digging graves	40 00	
Postage, etc.	1,875 00	
Livery, hiring, etc.	5,130 04	
Diphtheria antitoxin	2,986 80	
Prevention of infectious diseases	2,439 37	
Care of city patients	34 94	
Tuberculosis Nurses' Division	409 42	
Dairy farm inspection	2,128 15	
Automobile expenses	784 34	
Total		40,311 17
Surplus of credit		$11 04
Balance to surplus, 1913		11 04

QUARANTINE STATION SALARIES.

ORIGINAL APPROPRIATION, Salaries		$14,491 60

EXPENDITURES.

Quarantine Officer, Thomas L. Richardson, M. D.	$3,000 00	
Asst. Quarantine Officer, A. D. Driscoll, M. D., 9½ months	1,445 00	
Asst. Quarantine Officer, Edward G. Altvater, M. D., 1 month, 19 days	245 00	
Captain No. 1, James C. Evans	840 00	
Captain No. 2, Wm. T. Green, 10 months	585 00	
Captain No. 2, David Wood, 1 month, 25 days	121 86	
Engineer No. 1, John Kellner	840 00	
Engineer No. 2, Bernard E. Eckert	780 00	
Fireman No. 1, John L. Smith	660 00	
Fireman No. 2, Patrick McCauley	660 00	
Deckhand No. 1, Bernard McMahon	660 00	
Deckhand No. 2, Alonzo Evans	660 00	
Messenger, George M. Streeper	660 00	
Gardner, John L. Matthu	660 00	
Nurse, M. T. Armacost	660 00	
Watchman, T. W. Merchant, 25 days	47 14	
Watchman, Charles H. Kronhardt, 9½ months	522 50	
Cook, Lula Martin, 5½ months	137 50	
Cook, Laura Dobson, 2½ months	62 50	
Cook, Clara Mason, 1 month	25 00	
Cook, Adeline Snowden, 3 months	75 00	
Laundress, Sarah Cook, 10 months	200 00	
Laundress, Lula Martin, 1½ months	30 00	
Laundress, Clara Mason, 15 days	10 00	
Extra Nurse, Laura Dobson, 10½ months	313 00	
Extra Nurse, Beulah Barclay, 12 days	7 20	
Matron, Anna M. Summers, 10 months	350 00	
Total		14,256 70
Surplus of credit		$234 90
Balance to surplus, 1913		234 90

Quarantine Hospital Expenses.

Original Appropriation, Expenses		$7,350 00
Credit Baltimore County (smallpox)		180 30
Credit Baltimore County (smallpox)		59 25
Board of Estimates (smallpox)		1,200 00
Board of Estimates (boiler for tugboat)		5,000 00
		$13,789 55

EXPENDITURES.

Market supplies	$1,984 87	
Groceries	781 93	
General supplies	899 11	
Feed for horses	385 87	
Coal for buildings	393 14	
Coal for boats	1,228 92	
Ice	238 25	
Hospital supplies	150 66	
Farm supplies	4 80	
Repairs to boats	1,036 49	
Gasoline, coal oil, etc.	380 71	
Hire of extra boat	142 50	
Maritime Exchange	300 00	
Sundry expenses	689 78	
Gas plant	140 00	
Tugboat boiler	4,529 21	
Total		13,286 24
Surplus of credit		$503 31
Balance to surplus, 1913		503 31

SYDENHAM HOSPITAL SALARIES.

ORIGINAL APPROPRIATION, Salaries		$10.160 00

EXPENDITURES.

Superintendent, S. T. Nicholson, Jr., M. D.	$2,000 00	
Asst. Physician, J. C. Stansbury, M. D., 4 months, 9 days	214 52	
Asst. Physician, John F. Hogan, M. D., 7½ months	375 00	
Superintendent of Nurses, Mary J. Putts, 9 months	675 00	
Superintendent of Nurses, Katie Wesley, ½ month	37 50	
Superintendent of Nurses, A. E. Hagen, 1½ months	75 00	
Superintendent of Nurses, Fannie Michael, 2½ months	187 50	
Clerk, D. Edgar Fay, 9 months	450 00	
Secretary, Alma Smith., 2 months	100 00	
Secretary, Venie A. Myer, ½ month	25 00	
Supervisor, Katie Wesley, 9½ months	475 00	
Nurse, Lena C. Baker, 7 months	245 00	
Nurse, May Fuller, 2 weeks	30 00	
Nurse, Laura Fry, 3 months	105 00	
Nurse, Harriet Snyder, 1 month	35 00	
Nurse, Mae Seebold, 9 months, 19 days	384 51	
Nurse, Carrie Hoffman, 9 months, 25 days	347 18	
Nurse, May Fuller, 1 week	10 00	
Nurse, Helen Johanns, 3 months	127 50	
Nurse, Alice Caron, 2 weeks, 10 days	30 21	
Nurse, Minnie Smith, 2 weeks	20 00	
Nurse, Gertrude Lee, 3 months, 24 days	131 53	
Nurse, Isabel Mulick, 2 weeks	17 50	
Cook, Mary Kennedy	300 00	
Laundress, Ella Rockel, 7½ months	181 25	
Laundress, Anna Hutchins, 1½ months	28 75	
Laundress, Mrs. Nicoll, 3 days	2 50	
Laundress, Anna Weinbach, 2 months	50 00	
Laundress, Sophia Lay, 1½ months	37 50	
Amounts carried forward	$6,697 95	$10,160 00

Amounts brought forward	$6,697 95	$10,160 00
Laundress, Ida Krebs, ½ month	12 50	
Maid, Mary Straughn, 1½ months	30 00	
Maid, Sophia Beyer	240 00	
Maid, Margaret Lawrence, 10 months, 14 days	209 33	
Maid, Mary O'Brien	240 00	
Orderly, Edward Meehan, 2 weeks	20 00	
Orderly, Thomas Hutson, 7½ months	225 00	
Orderly, George Trice, 4½ months	135 00	
Laborer, George Trice, 2 weeks	15 00	
Chauffeur, John Burns, 7½ months	365 00	
Chauffeur, Thomas Hutson, 4½ months	225 00	
Messenger, Joseph P. Butler, 7½ months	225 00	
Messenger, Edward Murphy, 1 month, 1 week	37 50	
Messenger, Edward Meehan, 2 months, 19 days	82 50	
Utility Man, Edward Vogler, 11½ months	690 00	
Special Nurse, Alice Caron, 1 week	25 00	
Special Guard, George Trice, 4 months, 17 days	137 90	
Total		9,612 68
Surplus of credit		$547 32
Balance to surplus, 1913		547 32

Sydenham Hospital Expenses.

ORIGINAL APPROPRIATION, Expenses		$10,650 00

EXPENDITURES.

Subsistence	$4,232 94	
Department expenses	2,309 89	
General house and property expense	1,925 45	
Capital expense	302 58	
Professional care of patients	1,026 15	
Administration expenses	852 99	
Total		10,650 00

Abatement of Nuisances.

Original Appropriation	$1,000 00
Collections	1,535 24
Total credits	$2,535 24

EXPENDITURES.

Baltimore Sewerage Commission	$76 13	
City Engineer's Department	61 50	
Wm. Hellbach	75 77	
P. Flanigan & Son	261 13	
Charles A. Irwin	5 00	
T. Howard Boland	7 60	
P. Flanigan & Son	237 58	
Wm. Hellbach	51 39	
Wm. Frosburg	61 27	
Sewerage Commission	98 84	
P. Flanigan & Son	347 67	
City Engineer's Department	31 15	
Sewerage Commission	52 00	
Charles A. Irwin	9 00	
Sewerage Commission	287 10	
City Engineer's Department	11 70	
Odorless Excavating Apparatus Company	25 00	
P. Flanigan & Son	63 79	
Sewerage Commission	48 72	
Sewerage Commission	42 72	
Sewerage Commission	18 58	
Total		1,873 64
Surplus of credit		$661 60
Balance to surplus, 1913		661 60

TUBERCULOSIS DISPENSARY.

ORIGINAL APPROPRIATION		$6,000 00

EXPENDITURES.

Salaries	$3,720 00	
Rent of dispensaries, janitor service, general sundry expenses, etc.	2,268 56	
Total		5,988 56
Surplus of credit		$11 44
Balance to surplus, 1913		11 44

HEALTH DEPARTMENT REVENUE.

SALE OF BIRTH AND DEATH TRANSCRIPTS.

January	$133 00
February	108 50
March	164 10
April	108 50
May	102 00
June	94 00
July	107 00
August	89 00
September	116 00
October	106 00
November	68 10
December	110 50
Total	$1,306 70

QUARANTINE RECEIPTS.

TONNAGE TAX.

January	$1,526 34
February	1,596 62
March	1,414 05
April	2,017 53
May	1,912 33
June	1,764 97
July	1,988 10
August	1,996 31
September	1,268 05
October	1,968 97
November	1,594 60
December	1,831 71
Total	$20,879 58

SYDENHAM HOSPITAL REVENUE.

Wilbur Himmillian	$9 29
Jacob Rye	8 57
Gilbert Simmons	10 00
Eva James	24 29
Mary Scott	40 00
Jan. Tendowski	82 00
Mary Scott	80 00
Miss Wilson's nurses	28 00
Francis Shaefer	14 29
Anna Arzer	10 00
Katherine Arzer	12 00
Josepha Nysocki	82 00
Mary Sudzinka	56 00
Martha Regall	22 00
Elsie Rether	25 00
Mrs. Hatch	24 00
Mrs. McGinnis	18 00
Sale of old sinks and lavatory	20 00
Lena Labovitz	7 86
Ida Friedman	23 00
Rebecca, Harry and Moses Balt	52 86
Franklin Bossom	15 70
Katherine Loeffler	10 00
Walter McNulty	22 85
Benjamin Resnick	25 00
Bernard Ritterpusch	20 00
Morris Leipsitz	22 88
Bernard Ritterpusch	5 00
Charlotte Braun	15 00
Julia Pfortsch	100 00
Marie Ryland	27 84
Doloris Tonarelli	5 00
Hulda Prissman	6 25
Wm. Bossom	15 00
Total	$939 68

M. HARRY LAIB, *Secretary.*

ANNUAL REPORT

OF THE

DIVISION OF BACTERIOLOGY

Report of the Division of Bacteriology.

BALTIMORE, January 1, 1914.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

I herewith respectfully report on the work performed in the Division of Bacteriology of the Sub-Department of Health during the year ending December 31, 1913.

BACTERIOLOGICAL EXAMINATION OF WATER SUPPLY.

During the past year the drinking water has been treated by means of calcium hypochlorite in order to destroy the various bacteria which cause such intestinal diseases as typhoid fever, paratyphoid fever, dysentery, and other intestinal infections. The hypochlorite of calcium has been added to the water under the direction of Mr. Ezra B. Whitman, Water Engineer, and that added to the Gunpowder supply is placed in the water at the effluent of Lake Montebello. The influent at Lake Montebello has been treated with alum so that the water first undergoes sedimentation in Lake Montebello, and the clearer effluent is then treated by means of calcium hypochlorite.

When in use the Lake Roland supply has been treated by means of calcium hypochlorite at the gate chamber at Lake Roland, and for a portion of the year the alum has been added in the conduit leading from Lake Roland to Hampden Reservoir, about half a mile from the influent of this reservoir. The average amount of alum and the various amounts of hypochlorite of calcium which have been used in treating the water are given in detail below:

RECORD OF AVAILABLE CHLORINE IN PARTS PER MILLION USED IN TREATING THE CITY WATER.

January 1, 1913—Gunpowder	1.5
January 1, 1913—Jones Falls	1.5
January 10, 1913—Gunpowder	.5
January 16, 1913—Gunpowder	.8
March 4, 1913—Gunpowder	.8
March 13, 1913—Gunpowder	Gates closed
March 17, 1913—Gunpowder	.8
June 2, 1913—Jones Falls	1.25
June 22, 1913—Gunpowder	1.0
June 22, 1913—Jones Falls	1.5
August 18, 1913—Gunpowder	1.5
August 18, 1913—Jones Falls	2.0
September 18, 1913—Gunpowder	2.0
October 30, 1913—Gunpowder	1.75
November 7, 1913—Jones Falls	1.75
November 30, 1913—Gunpowder	1.5
November 30, 1913—Jones Falls	2.0

The above table shows that the amount of hypochlorite has been varied from time to time, and a later statement will show the effect of this variation upon the bacterial content of the water and the typhoid morbidity.

An average of .663 grains per gallon of aluminum sulphate was added to the Jones Falls supply at the influent of Hampden Reservoir during the months of January and February whenever the turbidity rose over 30, and from March 3 to March 29 the aluminum sulphate varied from .308 to 1.03, according to the turbidity. On April 21 the alum was added through a weir in the conduit about half way between Lake Roland and Lake Hampden, and during the next two weeks the amounts added varied between .392 of a grain per gallon and 1.03 grains per gallon. From May 12 to May 24 from .390 to .806 of a grain per gallon of aluminum sulphate were added, according to the turbidity of the water, and from August 2 to August 15, from .14 to 1.817 grains per gallon were added. From September 15 to October 18 from .386 to 1.752 grains per gallon were added and from November 9 to November 22 from .359 to .504 of a grain per gallon were added. From April 2 to July 2 from .612 to 1.976 grains per gallon were added to the Gunpowder supply at the influent of Lake Montebello whenever the turbidity required it, and from this time until the end of the year from .405 parts to 2.532 grains per gallon were added daily as a routine measure.

Bacterial Reduction Effected By the Treatment of the Drinking Water.

The results of the treatment of the two supplies by the combined method of sedimentation by means of aluminum sulphate and disinfection by means of calcium hypochlorite are shown by monthly averages giving the comparative reduction in the storage reservoirs and the city taps as compared to the raw, untreated water in the two impounding reservoirs, and tables No. 1 and No. 2 will show these results in detail.

TABLE NO. 1—*Lake Roland System.*

MONTHS—WATER.		No. Examinations.	Average Bacteria per c. c.	Percentage of Bacterial Reduction.	Percentage of Positive Colon Tests.			
					1-100 c. c.	1-10 c. c.	1 c. c.	10 c. c.
January	Raw water	....	10,104	....	....	....	....	....
	Storage	....	5,173	48.9	....	....	....	....
	City taps	14	2,260	77.7	....	....	9	55
February	Raw water	...	489	....	....	....	....	....
	Storage	....	14	97.2	....	....	....	....
	City taps	53	195	60.2	....	....	7	18
March	Raw water	21	2,162	....	....	13	63	95
	Storage	48	165	92.4	....	0	8	29
	City taps	45	1,727	20.2	....	....	2	17
April	Raw water	13	3,825	....	14	4	78	100
	Storage	51	589	84.9	0	0	17	57
	City taps	56	1,338	65.1	....	....	8	25
May	Raw water	21	663	....	0	28	76	100
	Storage	49	117	82.4	0	0	12	53
	City taps	51	458	31.0	....	....	3	50
June	Raw water	17	382	....	4	28	76	100
	Storage	48	2,215	*479.8	0	2	39	83
	City taps	52	354	7.4	....	....	21	62
July	Raw water	25	1,052	....	3	19	65	96
	Storage	52	716	32.0	0	4	22	64
	City taps	54	72	93.2	....	....	15	58
August	Raw water	13	1,062	....	8	41	83	100
	Storage	51	290	72.7	2	9	21	77
	City taps	56	208	80.5	....	....	25	59
September	Raw water	15	4,098	....	12	31	100	100
	Storage	36	15,068	*267.6	0	2	23	63
	City taps	44	10	99.8	....	....	0	9
October	Raw water	14	4,199	....	26	40	93	93
	Storage	29	1,132	73.1	0	3	15	60
	City taps	24	79	98.2	....	....	4	25
November	Raw water	17	1,798	....	0	11	41	88
	Storage	40	7,482	*316.1	0	2	8	42
	City taps	28	13	99.3	....	....	0	3
December	Raw water	23	8,273	....	0	15	40	80
	Storage	45	214,700	*2,495.1	0	0	0	28
	City taps	54	483	94.2	....	....	0	2

*Increase.

TABLE NO. 2—*Loch Raven System.*

MONTHS—WATER.		No. Examinations.	Average Bacteria per c.c.	Percentage of Bacterial Reduction.	Percentage of Positive Colon Tests.			
					1-100 c.c.	1-10 c.c.	1 c.c.	10 c.c.
January	Raw water	....	2,783	....	....	....	....	....
	Storage	....	13,583	*388.0	....	....	....	....
	City taps	15	2,040	26.8	....	....	8	41
February	Raw water	....	5,673	....	....	....	....	....
	Storage	....	14	99.8	....	....	....	....
	City taps	53	350	93.9	....	....	0	7
March	Raw water	12	1,963	....	0	20	60	100
	Storage	24	40,536	*1,965.0	26	26	26	34
	City taps	51	1,415	28.0	....	....	2	11
April	Raw water	7	6,332	....	0	80	90	100
	Storage	24	2,214	34.9	39	39	39	53
	City taps	57	1,156	81.8	....	....	13	37
May	Raw water	9	16,066	....	10	60	100	100
	Storage	24	1,232	92.4	42	42	50	73
	City taps	54	296	98.2	....	....	24	49
June	Raw water	17	21,010	....	0	22	94	100
	Storage	24	16	99.9	32	32	36	44
	City taps	51	194	99.1	....	....	18	65
July	Raw water	14	939	....	4	33	92	100
	Storage	24	20	97.9	42	42	42	50
	City taps	53	82	91.3	....	....	20	60
August	Raw water	16	7,705	....	16	50	94	94
	Storage	26	3	99.9	7	7	7	14
	City taps	55	167	97.9	....	....	29	61
September	Raw water	22	4,393	....	13	45	77	99
	Storage	23	2	99.9	8	8	8	16
	City taps	47	6	99.9	....	....	6	12
October	Raw water	20	1,080	....	38	71	100	100
	Storage	27	.33	99.9	0	0	0	0
	City taps	23	19	98.3	....	....	0	8
November	Raw water	20	15,838	....	0	75	95	100
	Storage	23	.78	99.9	9	9	9	13
	City taps	27	2	99.9	....	....	0	0
December	Raw water	19	33,957	....	0	19	61	90
	Storage	20	1.3	99.9	4	4	4	4
	City taps	54	103	99.7	....	....	0	7

*Increase.

An examination of the two preceding tables shows quite a high average bacterial count for the raw, untreated water, both in the Lake Roland and Loch Raven systems. The raw water from Lake Roland before treatment with calcium hypochlorite showed a maximum average bacterial count of 10,104 bacteria per cubic centimeter for January and a minimum average of 382 for June. The influence of the hypochlorite in the storage reservoirs, both with and without the use of alum, can be clearly seen from Table No. 1. With the exception of several months, indicated by asterisks, in which there was a remarkable increase in the number of bacteria, due to after-growths, the bacterial reduction in the storage reservoirs as compared to the raw water has been marked, the maximum bacterial reduction being 97.2 per cent. in February and the minimum reduction being 32 per cent. in July. This latter figure is much lower than the percentage for the various other months in which there are no after-growths, the next lowest reduction being 72.7 per cent. In June, September, November and December, the storage reservoirs showed a great increase in the number of bacteria present as compared to the raw water. This increase is due to the presence of after-growths caused by the development of bacteria which are more resistant to the effect of the calcium hypochlorite than most bacteria found in water. They are usually large, spore-bearing organisms, and as far as known play no part in the production of disease. They probably develop in large numbers at times when the less resistant bacteria and other forms of life in water are destroyed by the calcium hypochlorite, as it may be that most of their natural enemies are thus exterminated.

Upon examining the percentage of bacterial reduction of the city taps, it can be seen that this is quite variable until the month of September, since during the period prior to September the maximum bacterial reduction in the water from the city taps was 93.2 per cent. and the minimum reduction was only 7.4 per cent. This can probably be explained by the fact that the amount of hypochlorite used has been somewhat variable, but on August 18 it was increased to an amount equalling 2.0 parts of available chlorine per million parts of water, and with the exception of a short time during November, continued at this amount until the end of the year. The effect of this increase can be clearly seen by examining the column of the percentage of bacterial reduction from September to the end of the year, the maximum bacterial reduction being 99.8 per cent. and the minimum bacterial reduction remaining as high as 94.2 per cent. The good effect of the increase in the hypochlorite was not apparent in the city taps until the first of September, since the water takes from about a week to ten days to flow from the storage reservoirs through the water mains to the city taps. Beginning with the first of September there is a great difference in the bacterial counts, plates often showing no colonies per cubic centimeter, and the counts rarely reaching over five colonies per plate.

Table No. 1 also shows that during the early part of the year the percentages of positive colon tests were variable and often high both in the storage water and city tap water. The maximum for the storage reservoirs was 83 per cent. in June and the minimum was 29 per cent. in March in 10 cubic-centimeters, and even in one cubic centimeter the maximum percentage of positive tests was 21 per cent. during August and the minimum was 8 per cent. during March. The maximum percentage of positive colon tests in 10 cubic centimeters of the tap water was 62 per cent. during June and the minimum was 17 per cent. during March. The maximum percentage of positive colon tests in one cubic centimeter of the tap water was 25 per cent. during August and the minimum was 2 per cent. during March.

When one examines the results in the elimination of the colon bacillus from the water from September until the end of the year, the contrast between this period and the former months is marked, especially in the water from the city taps.

The maximum percentage of positive colon tests in 10 cubic centimeters of the storage water was 63 per cent. in September and the minimum 28 per cent. in December, whereas in one cubic centimeter the maximum was 23 per cent in September and no percentage in December. The elimination of the colon bacillus from the drinking water as it flows from the city taps and is distributed to the citizens is even more marked, the maximum number of positive colon tests in 10 cubic centimeters being 25 per cent. in October and the minimum being 2 per cent. in December, whereas in one cubic centimeter of water three of the months show no percentage of positive tests, and October shows only 4 per cent. of such tests.

The result of changing the amount of hypochlorite to a sufficient amount to equal 2.0 parts of available chlorine per million parts of water has been beneficial and has resulted in a marked reduction in the total number of bacteria present as well as of the intestinal organisms.

Table No. 2 shows the results obtained in the examination of the water from the Loch Raven system, and it can be seen that the average bacterial count per cubic centimeter has been quite variable and often high. The maximum average bacterial count of the raw, untreated water was obtained in December with an average of 33,957 bacteria per cubic centimeter, and the minimum average bacterial count was obtained in July with an average of 939 bacteria per cubic centimeter. With the exception of after-growths obtained in January and March, there has been a marked reduction in the bacterial count in the storage reservoirs, the maximum bacterial reduction being 99 9 per cent. in June, August, September, October, November and December, and the minimum bacterial reduction being 34.9 per cent. in April. The percentage of reduction in the water from the city taps has been also variable, the maximum being 99.9 per cent. in September and November, and the minimum being 26.8 per cent. in January. It can be seen that there has been a marked reduction in the bacterial count from the city taps beginning with May, although July showed a decrease in the percentage. A fairly constant and satisfactory reduction is shown from September on until the end of the year, the reduction being practically 99 per cent. of bacteria as compared to the raw water. The change in June may be accounted for by the increase in the amount of available chlorine used for disinfection to 1.00, but this was not entirely satisfactory, and the change on August 18 to 1.5, and later, on September 18, to 2.0 parts per million, with a slight reduction later, may account for the continuous satisfactory results obtained from September to the end of the year.

The presence of the colon bacillus in the raw water was not obtained for January and February, but during the rest of the year it can be seen that the percentage of positive tests has been quite variable in the various quantities of water examined. The maximum of 100 per cent. of positive tests in 10 cubic centimeters of water was noted during March, April, May, June, July, October and November, and a minimum of 90 per cent. of positive tests was noted during December. The maximum percentage of positive colon tests in one cubic centimeter of water of 100 per cent. was noted during May and October, whilst the minimum of 60 per cent. was noted during March. A maximum percentage of positive tests in the storage reservoirs in 10 cubic centimeters was 73 per cent. in May and the minimum was no percentage in October. In one cubic centimeter the maximum was 50 per cent. in May and the minimum was no percentage in October. In the water from the city taps the maximum percentage of positive tests in 10 cubic centimeters was 61 per cent. in August, and the minimum was no percentage in November. In one cubic centimeter the maximum percentage was 29 per cent. in August and the minimum was no percentage in February, October, November and December.

The percentage of positive tests in both one and 10 cubic centimeters has been variable and somewhat unsatisfactory until October, but from that time on there has been a practical destruction of intestinal organisms by means of the calcium hypochlorite. It would seem that this is due to the increase of available chlorine to 2.0 parts per million on September 18, although this has continued with its gradual reduction again, as seen by the record of available chlorine on page 528, to 1.5 on November 30. The use of less than 1.5 parts of available chlorine per million parts of water would probably prove unsatisfactory, as this seems to be about the minimum amount that will cause complete destruction of intestinal organisms in the drinking water.

The figures for the raw water and the storage water found in tables No. 1 and No. 2 have been kindly furnished by Mr. J. Bosley Thomas, director of the laboratory of the Water Board.

Table No. 3, which follows, showing typhoid fever in Baltimore from 1906 to date, shows that there was a gradual tendency towards an increase in typhoid cases which culminated in the outbreak of 1910, in which there were 1,891 cases reported and 235 deaths. About the first of June, 1911, the use of calcium hypochlorite was begun for the purpose of disinfecting the drinking water, and the table shows that there has been a gradual reduction in the cases and deaths since that time up to the present date with the exception to be noted below. The number of cases of typhoid fever during the first six months of the year 1913 compares very favorably with the number of cases reported during the same months of 1912, but during July there is a moderate increase in the number of cases, which showed a great increase during the month of August, and a continued but lesser increase during the month of September as compared to these months of 1912. Owing to this relative increase in the number of typhoid cases, the amount of hypochlorite for the Gunpowder supply was increased to 2.0 parts per million on September 18, and the typhoid fever began to show a drop about the first of October. The number of reported cases for October, November and December compares very favorably to those of previous years, and it would seem that the increase in the amount of hypochlorite, together with the routine precipitation of the bacteria in the water by means of alum, caused a diminution in the number of typhoid cases for the rest of the year.

Chart No. 1, which follows Table No. 3, shows the number of reported cases for the various years from 1910 to 1913 inclusive, together with the average number of cases from 1906 to 1910 inclusive. The legend will show the colors which represent the various years, and the number of typhoid cases is expressed by the height of the various columns in the chart. It can be seen that the blue columns representing the number of cases during the various months of 1913 are quite low until July, but during July, August and September they are higher than those for 1912. The abrupt drop again in October is well shown and the chart indicates in a graphic manner the sharp outbreak of typhoid during August of 1913, which does not compare, however, in height to the column for the same month of 1910.

TABLE No. 3—*Typhoid Fever in Baltimore, January, 1906, to December, 1913, Showing Decrease in Morbidity and Mortality Since the Use of Hypochlorite.*

MONTHS.	1906.		1907.		1908.		1909.		1910.		1911.		1912.		1913.		Average of Five Years, 1906-1910.	
	Case Incidence.	Deaths.	Case Incidence.	Deaths.	Case Incidence.	Deaths.	Case Incidence.	Deaths.	Case Incidence.	Deaths.	Case Incidence.	Deaths.	Case Incidence.	Deaths.	Case Incidence.	Deaths.	Case Incidence.	Deaths.
January......	31	12	43	12	47	7	39	16	40	7	55	11	47	9	53	8	40	10.8
February.....	31	6	16	5	26	9	23	3	25	11	31	3	28	7	40	14	24	6.8
March........	25	6	37	6	36	3	20	5	30	12	35	5	33	11	38	8	29	6.4
April.........	67	11	35	17	24	2	22	4	22	4	44	8	37	10	17	3	36	11.2
May..........	143	12	65	3	40	3	23	5	31	2	56	7	30	3	31	6	60	5.0
June..........	87	5	41	6	47	3	41	6	46	8	34	8	57	3	51	9	52	4.2
July..........	105	14	78	22	149	24	107	11	110	7	89	4	98	15	148	15	110	15.6
August........	284	34	217	23	339	35	217	20	473	30	280	22	198	22	314	22	306	28.4
September...	206	32	469	41	364	29	312	24	398	49	241	31	212	18	233	20	349	35.0
October......	125	26	241	47	187	30	138	23	359	42	170	28	190	12	129	18	210	33.6
November....	59	15	87	31	99	25	61	10	251	37	104	19	77	9	65	8	111	23.6
December....	46	10	91	17	68	10	66	9	106	26	62	8	76	17	44	5	75	14.4
Total..	1,209	183	1,420	230	1,426	180	1,069	136	1,891	235	1,201	154	1,083	136	1,163	136	1,403	192.8

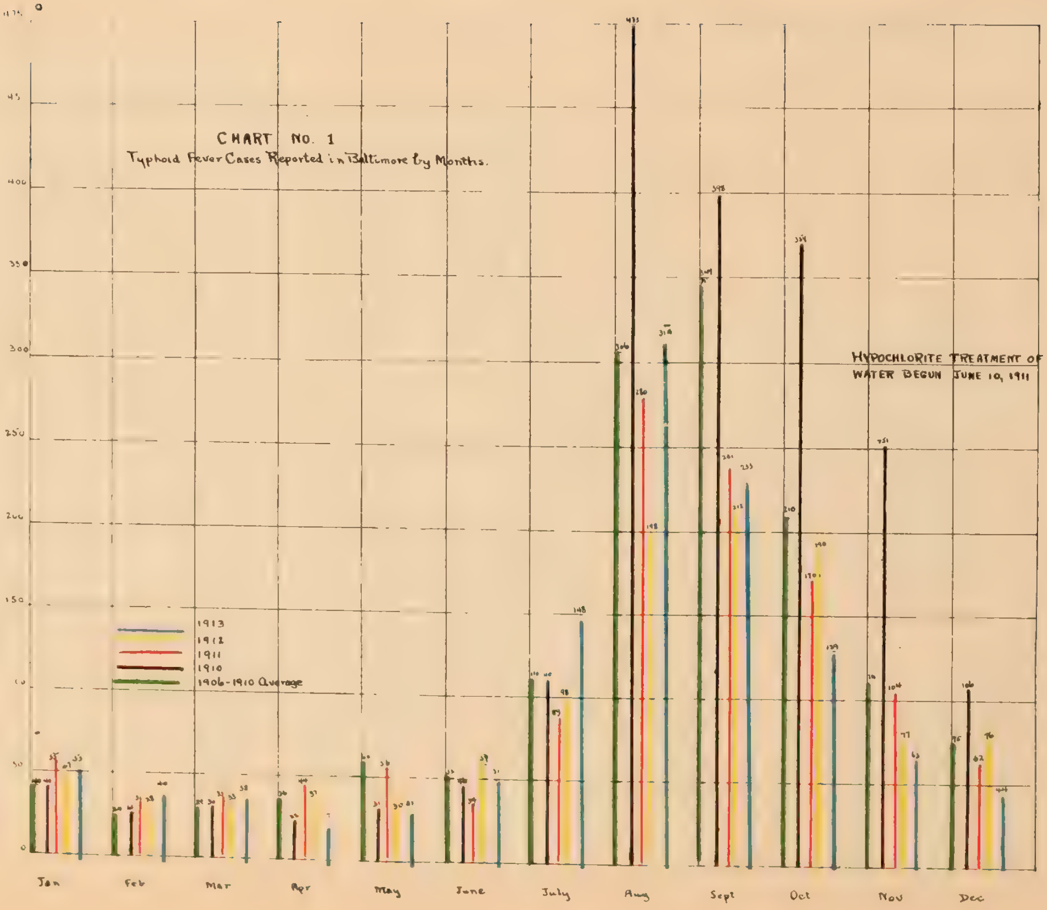
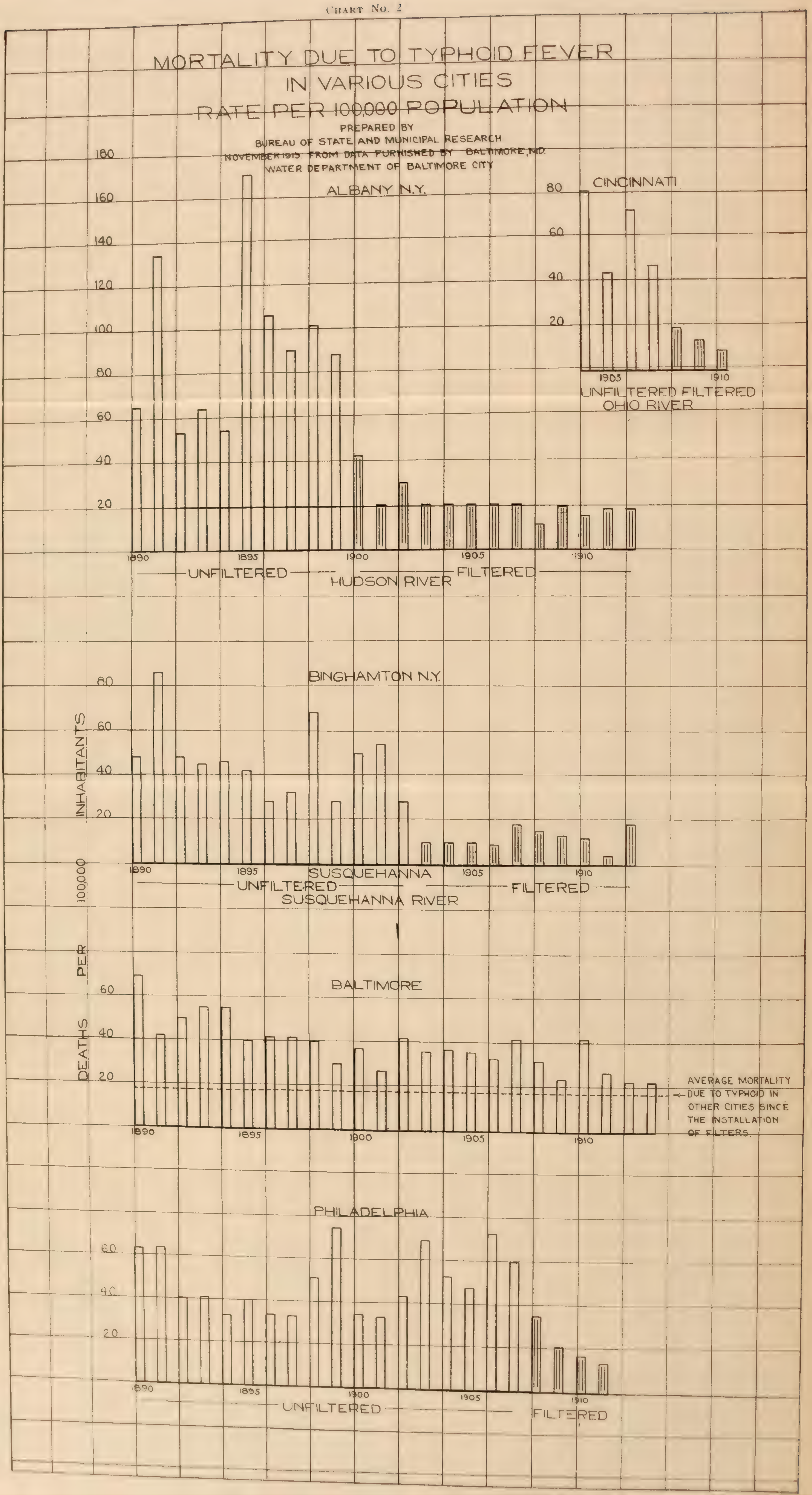


CHART NO. 1

Typhoid Fever Cases Reported in Baltimore by Months.

CHART No. 2


MORTALITY DUE TO TYPHOID FEVER
IN VARIOUS CITIES
RATE PER 100,000 POPULATION
PREPARED BY
BUREAU OF STATE AND MUNICIPAL RESEARCH
NOVEMBER 1913. FROM DATA FURNISHED BY BALTIMORE, MD.
WATER DEPARTMENT OF BALTIMORE CITY
ALBANY N.Y.
180
160
140
120
100
80
60
40
20
1890
1895
1900
1905
1910
UNFILTERED
FILTERED
HUDSON RIVER
CINCINNATI
80
60
40
20
1905
1910
UNFILTERED FILTERED
OHIO RIVER
BINGHAMTON N.Y.
80
60
40
20
1890
1895
1905
1910
SUSQUEHANNA
UNFILTERED
FILTERED
SUSQUEHANNA RIVER
DEATHS PER 100,000 INHABITANTS
BALTIMORE
60
40
20
1890
1895
1900
1905
1910
AVERAGE MORTALITY DUE TO TYPHOID IN OTHER CITIES SINCE THE INSTALLATION OF FILTERS.
PHILADELPHIA
60
40
20
1890
1895
1900
1905
1910
UNFILTERED
FILTERED

An entire study of the water supply shows that the calcium hypochlorite when used in sufficient quantity is capable of checking the water-borne typhoid, but the amount which is required probably varies between 1.5 and 2.0 parts of available chlorine per million parts of water.

Chart No. 2, which has been kindly furnished by Mr. William H. Maltbie, Director of the Bureau of State and Municipal Research, shows a marked reduction in the deaths from typhoid fever per 100,000 of population in various cities which has followed the installation of filters. This chart also shows the mortality from typhoid fever per 100,000 inhabitants since 1890 in Baltimore. The average mortality due to typhoid in all of the other cities since the installation of filters is also shown by a set of interrupted lines running through these columns, thus being combined with the data from Baltimore.

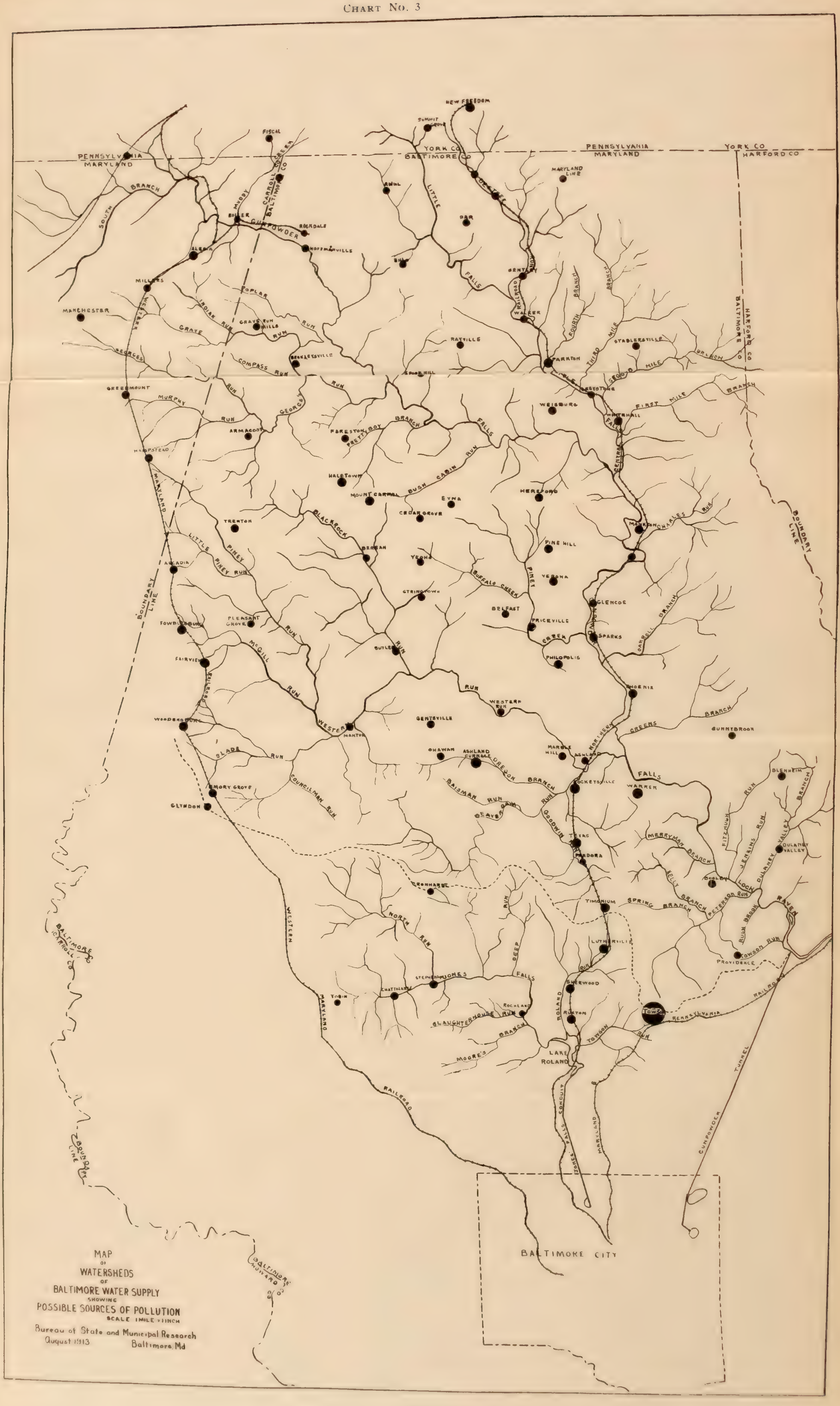
This chart shows in a striking manner the great reduction in deaths from typhoid fever in the various cities following upon the purification of the water by means of filtration, and the average rate per 100,000 of the various cities since the installation of filters is seen to be 18 per 100,000 inhabitants. From 1890 to 1910 inclusive the rate in Baltimore has been variable, but always above this number, varying from 79 per 100,000 in 1890 to 24 per 100,000 in 1909. Owing to the increased number of typhoid cases during 1910 and an increased number of cases during the early months of 1911 as compared to the same months of 1910, the use of calcium hypochlorite was instituted about June 1 for the disinfection of the city water supply.

The chart shows that although the death rate for 1911, 1912 and 1913 was not reduced to the average death rate for the other cities after the installation of filtration plants, yet the death rate in Baltimore is lower than that for the vast majority of previous years, even though the population has increased. If the cases of typhoid fever during July, August and September had not increased over the numbers for the previous year the death rate for 1913 would have been lower, and it would seem that enough calcium hypochlorite to entirely eliminate the intestinal organisms from the drinking water should always be used in the future treatment of the water supply of Baltimore.

Chart No. 3, which has also been kindly furnished by Mr. Maltbie, shows in a striking manner the number of towns and villages upon the water shed of Baltimore city, any one of which may be a possible source of pollution to the water supply. In addition to these larger centers of population there are also numerous private residences scattered along the banks of the streams which supply water to the two main tributaries serving as a source of the drinking water of Baltimore. The results of the bacteriological examination of the raw water show that some of these sources must actually pollute the city drinking water, and these facts again emphasize the importance of a complete disinfection of the drinking water as far as intestinal organisms are concerned.

The results of the examination of the drinking water show that the intestinal organisms have been practically destroyed by 1.5 parts of available chlorine for the Gunpowder water, and 2.0 parts for the Jones Falls supply. The practical absence of residual chlorine from the drinking water also indicates that the amounts above mentioned are sufficient to destroy the intestinal organisms without producing a residue of free chlorine in the drinking water. It would seem that these amounts are sufficient for the proper disinfection of the drinking water during the winter months, but larger quantities should be used during the summer and autumn months. The analyses for residual chlorine were made by Mr. Craig, under the direction of Dr. Frederick C. Blanck, Chief and Chemist of the Bureau of Food and Dairy Inspection, to whom we are indebted for the information.

Table No. 4 shows the results of the analyses for residual chlorine from the city tap from each ward on October 16, CHART NO. 3



MAP
OF
WATERSHEDS
OF
BALTIMORE WATER SUPPLY
SHOWING
POSSIBLE SOURCES OF POLLUTION
SCALE 1 MILE = 1 INCH

Bureau of State and Municipal Research
August 1913 Baltimore Md

PENNSYLVANIA
MARYLAND
YORK CO
BALTIMORE CO
HARFORD CO
CARROLL CO
BOUNDARY LINE
BALTIMORE CARROLL CO
BALTIMORE HOWARD CO
NEW FREEDOM
SUMMIT GROVE
FISCAL
MARYLAND LINE
SOUTH BRANCH
MUDDY
BOILER
GUNPOWDER
ROCKDALE
HOFFMANSVILLE
ALESIA
MILLERS
MANCHESTER
LITTLE FALLS
BEE TREE
GENTRY
WALKER
RAILROAD
FOURTH BRANCH
THIRD MILE BRANCH
SECOND MILE BRANCH
FIRST MILE BRANCH
STABLERSVILLE
PARKTON
BENTLEY
WEISBURG
WHITEHALL
FALLS
NORTHERN CENTRAL
MONKTON
CHARLES RUN
INDIAN RUN
POPLAR RUN
GRAVE RUN
GRAVE RUN MILLS
BECKLEYSVILLE
COMPASS RUN
GEORGES RUN
GEORGES
GREENMOUNT
MURPHY RUN
ARMACOST
HAMPSTEAD
WESTERN MARYLAND
PRETTY BOY BRANCH
FORESTON
HALETOWN
MOUNT CARMEL
BUSH CABIN RUN
EVNA
CEDAR GROVE
RAYVILLE
SPOOK HILL
HEREFORD
PINE HILL
VERONA
PINEY CREEK
BUFFALO CREEK
BLACKROCK
BEREAN
YEOHO
STRINGTOWN
BELFAST
PRICEVILLE
GLENCOE
SPARKS
PHILOPOLIS
CARROLL BRANCH
TRENTON
LITTLE PINEY RUN
ARCADIA
PLEASANT GROVE
FOWBLESBURG
FAIRVIEW
McGILL RUN
BUTLER
WESTERN RUN
MANTUA
GENTSVILLE
PHOENIX
GREENS BRANCH
GUNNYBROOK
WOODENSBURG
SLADE RUN
COUNCILMAN RUN
EMORY GROVE
GLYNDON
CHAWAN
ASHLAND FURNACE
OREGON BRANCH
MARBLE HILL
ASHLAND
COCKEYSVILLE
BAISMAN RUN
BEAVER DAM RUN
GOODWIN RUN
WARREN
BLENHEIM
FITZHUGH RUN
JENKINS RUN
DULANEY VALLEY BRANCH
DULANEY VALLEY
MERRYMAN BRANCH
KELLY BRANCH
DOOLEY
TEXAS
PADONIA
LOCH RAVEN
PETERSON RUN
SPRING BRANCH
TIMONIUM
RUSH BROOK RUN
TOWSON RUN
PROVIDENCE
LUTHERVILLE
GROMHARDT
NORTH RUN
JONES FALLS
DEEP RUN
STEPHENSON
CHATTOLANEE
TOBIN
SHERWOOD
ROCKLAND
SLAUGHTERHOUSE RUN
MOORE'S BRANCH
RUXTON
ROLAND RUN
TOWSON RUN
TOWSON
PENNSYLVANIA RAILROAD
LAKE ROLAND
JONES FALLS CONDUIT
MARYLAND
GUNPOWDER TUNNEL
BALTIMORE CITY

when 2.0 parts of available chlorine per million parts of water were being used, both for the disinfection of the Gunpowder and Jones Falls raw water. This residual chlorine varied between .432 parts per million and 0.0, an average of .206 parts per million. The table also shows the amount of residual chlorine obtained on November 20, when 1.75 parts of available chlorine per million parts of water were being used for the disinfection of the Gunpowder and Jones Falls supplies. The maximum amount of residual chlorine at this time was .760 parts and the minimum was .320 parts per million parts of water, the average being .574.

On November 30 the amount of available chlorine in treating the Gunpowder drinking water was reduced to 1.5 parts, and the amount for the treatment of the Jones Falls supply was increased to 2.0 parts per million parts of water. These amounts of chlorine have been continued until the end of the year, and the third column in Table No. 4 shows the amount of free chlorine which we can assume as being present about the end of December. These analyses were not made until after the end of the year, but as the conditions have remained the same it can be assumed with a fair degree of probability that the residual chlorine had practically disappeared from the water by the end of the year.

TABLE NO. 4—*Residual Chlorine in City Water, Expressed in Parts Per Million.*

WARDS.	Oct. 16.	Nov. 20.	Assumed Figures Dec. 31.*
First	.282	.560	.03
Second	None	.400	.02
Third	.432	.700	.03
Fourth	.372	.700	.03
Fifth	.252	.480	.03
Sixth	.282	.320	.03
Seventh	.192	.560	.02
Eighth	.132	.616	.03
Ninth	.192	.584	.03
Tenth	.132	.560	.02
Eleventh	.192	.560	.03
Twelfth	.192	.400	.03
Thirteenth	.192	.400	.02
Fourteenth	.252	.480	.03
Fifteenth	.192	.480	.03
Sixteenth	.192	.640	.03
Seventeenth	.192	.720	.04
Eighteenth	.072	.640	.04
Nineteenth	.180	.480	.02
Twentieth	.192	.720	.04
Twenty-first	.072	.700	.03
Twenty-second	.192	.560	.03
Twenty-third	.432	.760	.03
Twenty-fourth	.132	.760	.03
Avg. content for 24 wards...	.206	.574	.029

*The analyses upon which these figures are based were made during 1914, but as the amount of chlorine added to the water has not been changed since December 1, 1913, these figures probably represent the amounts of chlorine which would have been found in the drinking water about the end of December.

Chart No. 4 shows the distribution of the drinking water from the Gunpowder and Jones Falls systems throughout the different portions of the city. The legend showing the relation of the different shaded areas to the two services indicates that most of the city drinking water is either Gunpowder water or Gunpowder mixed with Jones Falls water. The Gunpowder water is impounded at Loch Raven and the Jones Falls water is impounded at Lake Roland. It is difficult to estimate just how much water is consumed from the Gunpowder supply and how much is obtained from the Jones Falls supply, but the several amounts of water used during the various months of the year are set forth in the following table which was kindly supplied by Mr. Ezra Whitman, Water Engineer. The amount of water pumped from the Gunpowder supply to the Middle Service, which is furnished mainly by the Jones Falls supply, can be seen from the table which also shows that most of the water is either Gunpowder alone or Gunpowder water mixed with that from the Jones Falls supply. The Upper Service is furnished by Jones Falls water.

The Gunpowder water furnished 69.2 per cent. of the total amount of water supplied to the citizens, and 28.5 per cent. of the total amount of water consumed consists of a mixture of Gunpowder and Jones Falls water, while only 2.2 per cent. of the total supply is furnished from pure, unmixed Jones Falls water.

TABLE No. 5—*Statement of Gunpowder and Jones Falls Water Used by the City During* 1913.

MONTHS.	Gunpowder Water Consumed by City (Gallons).	Jones Falls Water Consumed by City (Gallons).	Pumped from Gunpowder Supply to Middle Service (Gallons).	Middle Service Consumption (Gallons).	Total Upper Service (Gallons).
January	1,506,141,097	558,696,704	30,301,480	536,201,480	52,796,704
February	1,327,405,412	494,084,570	37,841,320	487,791,320	44,134,570
March	1,512,712,000	577,924,246	8,108,320	535,158,320	50,874,246
April	1,729,918,419	315,707,862	221,973,378	486,233,378	51,447,862
May	1,673,121,027	563,790,503	99,008,791	605,908,791	56,890,503
June	2,022,313,265	581,424,414	238,478,654	751,948,654	67,954,414
July	2,143,852,902	391,915,679	392,321,584	717,801,584	66,435,679
August	2,191,810,172	320,925,092	503,519,586	768,109,586	56,335,092
September	2,059,015,597	408,957,056	418,672,902	768,722,902	58,907,056
October	1,974,746,041	429,500,142	332,107,407	703,337,407	58,270,142
November	2,003,960,966	360,126,527	487,003,048	791,893,048	55,236,527
December	1,745,338,930	490,738,649	203,079,612	639,229,612	54,588,649
Total	21,890,335,828	5,493,791,444	2,972,416,082	7,792,336,082	673,871,444

EXAMINATIONS OF WELLS AND SPRINGS.

During the past year we have examined 41 specimens collected from wells and springs within the city limits, and the table which follows shows the number of specimens in which the colon bacillus was found, as well as the number of specimens in which high and low bacterial counts were obtained. It is difficult to establish an arbitrary standard for the exact number of bacteria which would render the water pure or polluted, but pure water from unpolluted artesian wells, driven wells or springs will usually contain from 100 to 300 bacteria per cubic centimeter. Surface water may contain from 500 to 1,000 bacteria and still not show any evidence of intestinal pollution. The number of bacteria in drinking water is so variable, however, that these figures may vary widely.

TABLE NO. 6—*Wells and Springs*, 1913.

BACTERIA PER CUBIC CENTIMETER.	Number of Examinations.	Colon Bacillus Present.	Percentage Positive for Colon Bacillus.
1-500	28	17	60.7
500-1000	2	2	100.0
1000-5000	11	10	90.9
Total	41	29	70.7

The above table shows that 70 per cent. of the wells and springs examined within the city limits shows the presence of intestinal pollution indicated by the presence of the colon or intestinal bacillus. The results of these examinations have been reported to the Assistant Commissioner of Health, who has adopted all means possible to close these wells and springs.

Examination of Wells and Springs from Dairy Farms Outside of the City Limits.

We made 12 examinations of wells and springs from dairy farms outside of the city limits, and in 11 of these examinations the bacterial count was between 1 and 500 and the colon or intestinal bacillus was present in 10 out of 11 examinations. In one case the count was between 500 and 1,000 and the colon bacillus was present. This organism, an evidence of intestinal pollution, was therefore present in 11 out of 12 specimens examined in water from the dairy farms, and these facts were reported to Dr. Frederick C. Blanck, Chemist and Chief of the Bureau of Food and Dairy Inspection.

Examinations of Table Waters.

During the past year we have examined 51 samples from the different table waters sold in Baltimore. Table No. 7 shows the results of these examinations. In 11 out of 51 specimens the colon or intestinal bacillus was found. These results were reported to the Commissioner of Health, who took proper steps to correct such conditions as dirty bottles, lack of refrigeration and sources of pollution surrounding the situation of the wells and springs from which table waters were obtained.

TABLE No. 7—*Examinations of Table Waters for* 1913.

BACTERIA PER CUBIC CENTIMETER.	Number of Examinations.	Colon Bacillus Present.	Percentage Positive for Colon Bacillus.
1-100	26	2	7.6
100-200	2	0	0.0
200-300	4	1	25.0
300-400	2	0	0.0
400-500	1	0	0.0
500-1000	3	1	33.3
1000-2000	4	2	50.0
2000-3000	2	1	50.0
3000-4000	3	1	33.3
4000-5000	1	0	0.0
5000-10,000	1	1	100.0
Over 10,000	2	2	100.0
Total	51	11	21.5

SPECIAL EXAMINATIONS.

Seventy-two special examinations were made for various citizens. These consisted of tests of filtered and unfiltered water, of special examinations where the citizens complained of a bad taste or odor in the water, and of examinations of several swimming pools. The results were all duly reported to the various individuals making applications for such examinations.

BACTERIOLOGICAL EXAMINATIONS OF MILK.

During the year we made 8,916 bacteriological examinations of milk, these examinations including the bacterial enumeration of the organisms present per cubic centimeter. Of these, 4,731 were collected at the various railroad stations, 701 from wagons, 547 from shops, 320 from lunchrooms, 445 from specimens examined at the plant after pasteurization, 380 specimens from milk collected at the pasteurizing plant before pasteurization, 857 original package samples of pasteurized milk collected from the wagons on the streets, 350 specimens in which usually only the streptococci and leucocyte counts were made and the ordinary bacterial count was omitted, and 585 specimens of a miscellaneous nature such as examination of milk from individual cows, examination of pasteurized milk at different stages of pasteurization, examination of milk for typhoid and paratyphoid, examination of milk for the colon bacillus as a means for determining the time of contamination, examination of milk for cause of disagreeable odor or taste, and examination of milk from hospitals to determine the quality of the milk.[*]

Table No. 8, which follows, shows the comparison by months of the milk collected from the railroad stations during 1913. This comparison is expressed by means of the bacterial index computed according to the Levy method which is described in the report of the Commission for National Milk Standards, Public Health Report No. 78. This table shows the number of specimens during the various months which were between the various bacterial counts set forth in the table, and also shows the rating for each of these sets of milk according to the Levy method. The bacterial index for each month is cited in the table, and it can be seen that this is higher as a rule in the cooler months and lower for the summer months. A high index expresses a better quality of milk in so far that this index is produced by low bacterial counts.

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[*] One hundred and ninety of these examinations of pasteurized milk and one hundred and sixty examinations of milk from the various hospitals were made by Mr. John H. Sewell, as a special investigation for the Women's Civic League of Baltimore.

TABLE NO. 8—*Comparison by Months of the Milk Collected from*

BACTERIAL COUNT.	Rating Figure, Per Cent.	Jan.		Feb.		Mar.		April.		May.	
		No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.
Under 10,000....	100	16	1,600	134	13,400	100	10,000	41	4,100	37	3,700
10,000-50,000....	90	84	7,560	127	11,430	117	10,530	116	10,440	68	6,120
50,000-100,000...	75	58	4,350	41	3,075	39	2,925	47	3,525	52	3,900
100,000-250,000...	50	79	3,950	36	1,800	61	3,050	52	2,600	60	3,000
250,000-500,000...	20	42	840	11	220	31	620	35	700	41	820
50,000-1,000,000..	10	30	300	13	130	17	170	28	280	28	280
Over 1,000,000...	0	71	0	12	0	39	0	52	0	90	0
Total.........	...	380	18,600	374	30,055	404	27,295	371	21,645	376	17,820
Bacterial index..	...	....	48.9	....	80.4	....	67.6	....	58.3	....	47.4

Stations During 1913 (Bacterial Index Computed by Levy Method).

June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.	
No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.
26	2,600	35	3,500	54	5,400	18	1,800	28	2,800	46	4,600	35	3,500
51	4,590	61	5,490	44	3,960	70	6,300	68	6,120	117	10,530	104	9,360
42	3,150	40	3,000	46	3,450	50	3,750	69	5,175	48	3,600	58	4,350
49	2,450	42	2,100	64	3,200	45	2,250	84	4,200	54	2,700	48	2,400
28	560	34	680	50	1,000	40	800	69	1,380	34	680	24	480
32	320	47	470	38	380	42	420	59	590	23	230	23	230
99	0	114	0	158	0	144	0	181	0	49	0	42	0
327	13,670	373	15,240	454	17,390	409	15,320	558	20,265	371	22,340	334	20,320
...	41.8	....	40.9	....	38.3	....	37.4	....	36.3	....	60.2	....	60.8

Table No. 9 shows a comparison by months of the milk collected from wagons during 1913. This table when compared to Table No. 8 shows a deterioration in the quality of the milk after leaving the station, since the bacterial index for the various months is lower than that for the corresponding months in Table No. 8.

TABLE No. 9—*Comparison by Months of the Milk Collected from*

Bacterial Count.	Rating Figure, Per Cent.	Jan.		Feb.		Mar.		April.		May.	
		No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.
Under 10,000.....	100	0	0	2	200	2	200	1	100	2	200
10,000-50,000....	90	2	180	8	720	3	270	5	450	0	0
50,000-100,000...	75	5	375	5	375	4	300	3	225	7	525
100.000-250,000...	50	4	200	9	450	10	500	4	200	10	500
250,000-500,000...	20	4	80	4	80	8	160	9	180	19	380
500,000-1,000,000.	10	11	110	0	0	5	50	11	110	16	160
Over 1,000,000...	0	13	0	2	0	3	0	21	0	102	0
Total.........	....	39	945	30	1,825	35	1,480	54	1,265	156	1,765
Bacterial index..	....	....	24.2	....	60.8	....	42.3	....	23.4	....	11.3

Wagons During 1913 (Bacterial Index Computed by Levy Method).

June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.	
No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.
0	0	1	100	0	0	1	100	0	0	0	0	0	0
4	360	2	180	0	0	0	0	0	0	0	0	2	180
7	525	8	600	1	75	2	150	4	300	0	0	1	75
18	900	5	250	1	50	6	300	1	50	1	50	7	350
14	280	17	340	1	20	1	20	4	80	1	20	11	220
14	140	10	100	6	60	4	40	2	40	2	20	13	130
51	0	60	0	26	0	26	0	23	0	5	0	24	0
108	2,205	103	1,570	35	205	40	610	34	470	9	90	58	955
....	20.4	....	15.2	....	5.8	....	15.2	....	20.4	....	10.0	....	16.5

Table No. 10, showing the comparison by months of the milk collected from the stores and dairies during 1913, shows a still more marked deterioration in the character of the milk as indicated by Levy's bacterial index, for although in one or two instances there is a slight increase in the store and dairy index for given months, yet the majority of the months shows a well marked lowering of the bacterial index for the store and dairy milk.

TABLE NO. 10—*Comparison by Months of the Milk Collected from Stores*

Bacterial Count.	Rating Figure, Per Cent.	Jan.		Feb.		Mar.		April.		May.	
		No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.
Under 10,000.....	100	0	0	0	0	5	500	0	0	0	0
10,000-50,000....	90	0	0	6	540	5	450	1	90	1	90
50,000-100,000...	75	2	150	5	375	4	300	2	150	1	75
100,000-250,000...	50	4	200	13	650	7	350	2	100	5	250
250,000-500,000...	20	0	0	13	260	6	180	4	80	3	60
500 000-1,000,000.	10	4	40	11	110	4	40	4	40	7	70
Over 1,000,000...	0	32	0	12	0	8	0	31	0	42	0
Total.........	....	42	390	60	1,935	39	1,820	44	460	59	545
Bacterial index..	....	....	9.3	....	32.2	....	46.7	....	10.4	....	9.2

and Dairies During 1913 (Bacterial Index Computed by Levy Method).

June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.	
No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.
0	0	2	200	0	0	1	100	0	0	0	0	0	0
0	0	0	0	1	90	0	0	0	0	0	0	1	90
0	0	2	150	1	75	0	0	0	0	1	75	2	150
4	200	5	250	1	50	1	50	1	50	0	0	3	150
8	160	3	60	4	80	1	20	1	20	1	20	4	80
6	60	2	20	3	30	1	10	0	0	0	0	5	50
24	0	54	0	40	0	28	0	31	0	29	0	32	0
42	420	68	480	50	325	32	180	33	70	31	95	47	520
....	10.0	....	7.1	....	6.5	....	5.6	....	2.1	....	3.1	....	11.06

Table No. 11 shows that the specimens of milk obtained from the lunchrooms correspond in their general character to those obtained from the stores and dairies, and a careful examination of these four tables shows that the milk as it arrives at the railroad stations contains smaller numbers of bacteria than that present either in the specimens obtained from wagons or those obtained from the stores, dairies and lunchrooms. The wagon milk contains fewer bacteria than either the stores, dairies or lunchroom samples, the maximum figures being obtained from this last group consisting of specimens from the stores, dairies and lunchrooms.

TABLE No. 11—*Comparison by Months of the Milk Collected from*

BACTERIAL COUNT.	Rating Figure, Per Cent.	Jan.		Feb.		Mar.		April.		May.	
		No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.
Under 10,000....	100	0	0	1	100	0	0	1	100	0	0
10,000-50,000....	90	0	0	2	180	0	0	5	450	0	0
50,000-100,000...	75	1	75	1	75	2	150	2	150	2	150
100,000-250,000...	50	0	0	11	550	3	150	6	300	1	50
250,000-500,000...	20	2	40	9	180	4	80	9	180	4	80
500,000-1,000,000..	10	1	10	3	30	0	0	10	100	3	30
Over 1,000,000...	0	9	0	4	0	6	0	32	0	29	0
Total.........	....	13	125	31	1,115	15	380	65	1,280	39	310
Bacterial index..	....	....	9.9	....	35.9	....	25.3	....	19.7	....	7.9

Lunchrooms During 1913 *(Bacterial Index Computed by Levy Method).*

June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.	
No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.	No. of Examinations.	Product.
0	0	0	0	0	0	0	0	0	0	1	100	0	0
0	0	0	0	0	0	1	90	0	0	0	0	1	90
0	0	0	0	0	0	0	0	1	75	0	0	0	0
2	100	0	0	1	50	0	0	0	0	2	100	3	150
2	40	0	0	2	40	1	20	2	40	1	20	5	100
5	50	1	10	0	0	3	30	1	10	2	20	3	30
21	0	9	0	26	0	24	0	16	0	14	0	7	0
30	190	10	10	29	90	29	140	20	125	20	240	19	370
....	6.3	....	1.0	....	3.1	....	4.8	....	6.2	....	12.0	....	19.5

Table No. 12 shows the result of the milk contest held by the Maryland State Dairymen's Association, from October 15 to November 15. This table clearly indicates that when sufficient care is taken, the character of the milk is very much better than that of the milk brought to the city under ordinary conditions. The large number of samples below 500,000 and the high bacterial index compared very favorably with the milk obtained throughout the various months of the year, when no special pains are taken to contest for a prize.

TABLE No. 12—*Showing Result of Milk Contest, Bacterial Index Computed By Levy Method.*

BACTERIAL COUNT.	Number of Examinations.	Product.	Rating Figure Per Cent.
Under 10,000	38	3,800	100
10,000-50,000	74	6,660	90
50,000-100,000	26	1,950	75
100,000-250,000	26	1,300	50
250,000-500,000	11	220	20
500,000-1,000,000	9	90	10
Over 1,000,000	4	0	0
Total	188	14,020	....
Bacterial index	....	....	74.6

Table No. 13 shows the condition of the milk from the various pasteurizing plants obtained directly from the plant, and this when compared to Table No. 14 shows that there is a slight deterioration in the milk from the plant to the street, since there is a smaller percentage of pasteurized milk in the original packages from the wagons showing lower counts than in that from the milk obtained from the pasteurizing plants.

TABLE No. 13—*Showing Condition of Milk from the Various Pasteurizing Plants Obtained Directly from the Plants.*

BACTERIAL COUNT.	Colon Present.	Colon Absent.	Per Cent. Present.	Per Cent. Absent.
1-100	0	1	0	100.0
100-500	2	4	33.3	66.0
500-1,000	2	16	11.1	88.9
1,000-5,000	13	35	27.1	72.9
5,000-10,000	15	38	28.3	71.7
10,000-50,000	69	84	45.2	54.8
50,000-100,000	35	15	70.0	30.0
100,000-500,000	49	19	72.1	27.9
Over 500,000	11	4	73.3	26.7
No count	15	18	45.5	54.5
Total	211	234	47.4	52.6

Table No. 14 shows the condition of the pasteurized milk as it is being dispensed to the customers, and the number of samples below 50,000 and above this number can be seen by examining the table.

TABLE No. 14—*Showing Condition of the Pasteurized Milk As It Is Dispensed to Customers.*

BACTERIAL COUNT.	Colon Present.	Colon Absent.	Per Cent. Present.	Per Cent. Absent.
1-100	2	1	66.6	33.3
100-500	2	4	33.3	66.6
500-1,000	2	15	11.8	88.2
1,000-5,000	35	64	35.3	64.7
5,000-10,000	18	42	30.0	70.0
10,000-50,000	115	70	62.2	37.8
50,000-100,000	67	28	70.5	29.5
100,000-500,000	172	35	83.2	16.8
Over 500,000	104	15	87.4	12.6
No count	46	20	69.7	30.3
Total	563	294	65.8	34.2

Chart No. 5 shows the bacterial index for the various months of the year for station, wagon, lunchroom, and dairy and store milk. The high curve for the station samples is indicated by the red line and the lower curve for the wagon samples is shown by the yellow line. This shows that the milk from the wagons has a much higher bacterial count, as indicated by the lower Levy rating, than that obtained from the various railroad stations. The milk from the so-called shops, which are really city dairies and stores, shows a still higher bacterial count, since the bacterial index is lower, and this is indicated by the curve with the black line. The lunchroom milk indicated by the curve with the green line shows a higher bacterial count than any of the other sets of milk samples, since it usually runs lower than any of the other groups. Several of the milks, however, show an exception to this rule, and it cannot be claimed that there is a very great difference between the milk obtained from the stores and dairies and that obtained from the lunchrooms as far as the bacterial count is concerned.

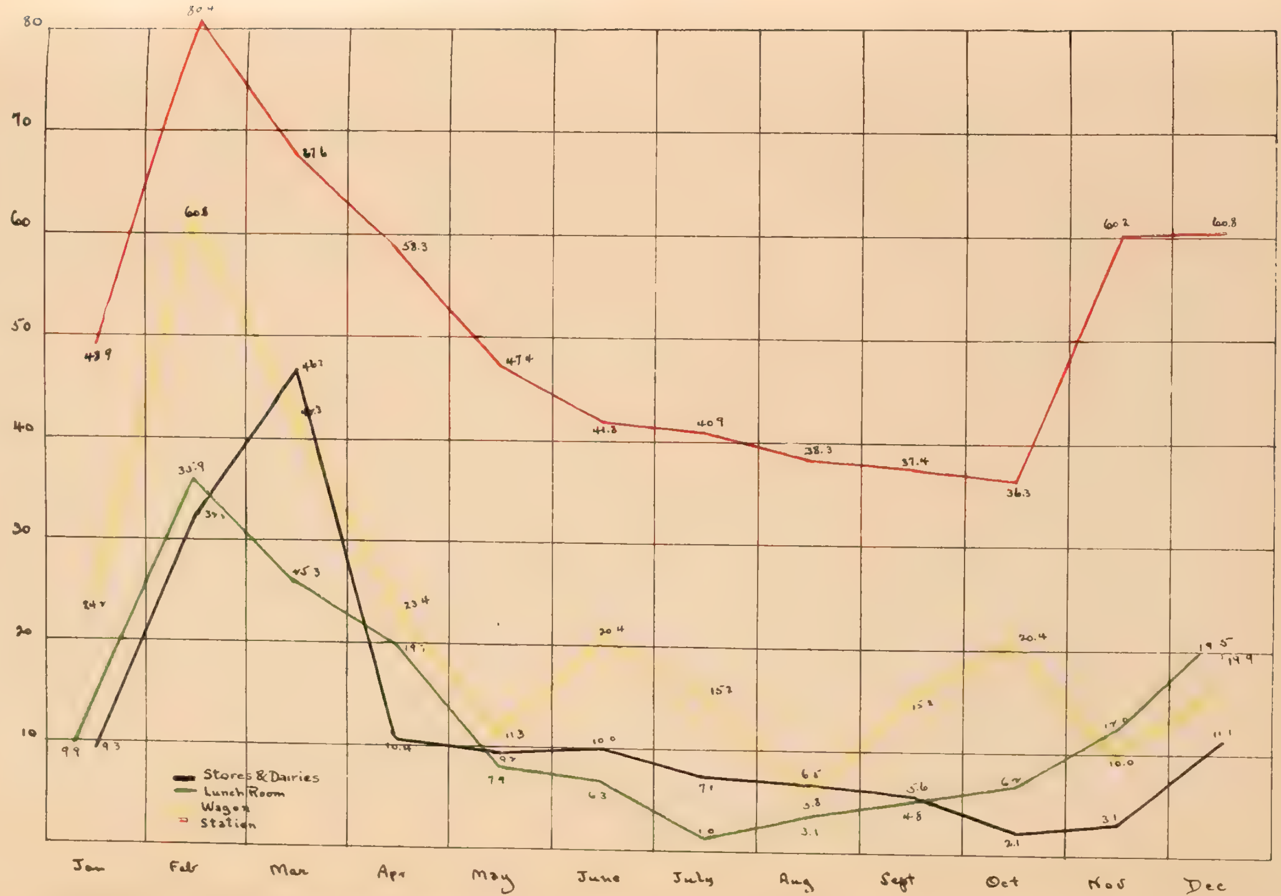

CHART No. 5—Showing graphically the bacterial index by months of milk from stations, wagons, lunch rooms, and dairies and stores.

Chart No. 6 expresses graphically by means of curves the relation between the reciprocal of the bacterial index of the station milk and the mean monthly temperature. Twice the reciprocal of the bacterial index was used to make the curves convergent instead of divergent, and it shows a remarkable correspondence between the average monthly temperature and the bacterial count as indicated by the Levy system of rating. If the simple bacterial index had been used, the curve for the temperature would have risen, while the curve for the bacteriological index would have fallen, and in order to make these two groups correspond in a graphic chart, the use of the doubled reciprocal has been adopted for illustrative purposes.

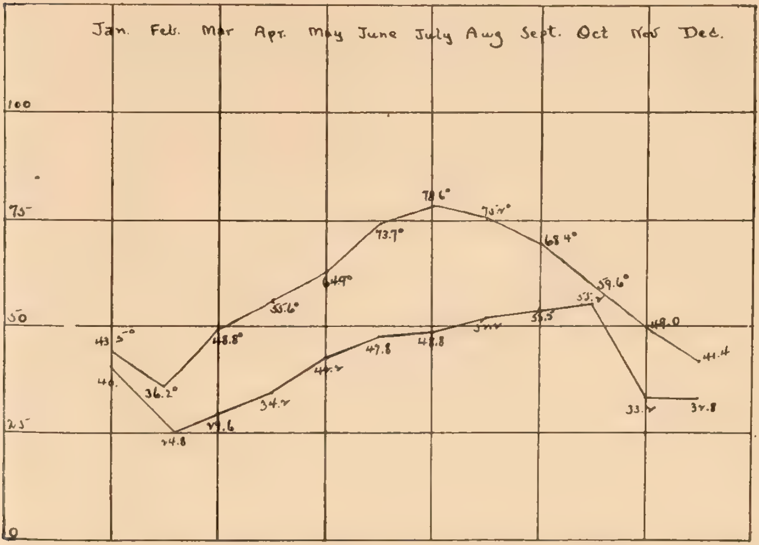

Chart No. 6—Expressing graphically the relation between the mean monthly temperature and the reciprocal of the bacterial index of station milk.

Table No. 15 shows the total number of examinations from the stations, wagons, shops and lunchrooms in which the bacterial count per cubic centimeter was under 10,000 and between the various other numbers stated in the table. It also shows the rating for the Levy bacterial index as well as the product, and the bacterial index for the year for each one of these various milks is stated at the bottom of the table. It should be remembered that the higher the bacterial index the lower the bacterial count, or in other words, the higher the bacterial index the cleaner the milk.

TABLE No. 15—*Showing the Milk Arranged According to Its Bacterial Count and So-Called Bacterial Index.*

January to December.

Bacterial Count.	Levy Rating.	Stations.		Wagons.		Shops.		Lunchrooms.	
		Number of Examinations.	Levy Product.	Number of Examinations.	Levy Product.	Number of Examinations.	Levy Product.	Number of Examinations.	Levy Product.
Under 10,000..........	100	570	57,000	9	900	8	800	3	300
10,000–50,000..........	90	1,027	92,430	26	2,340	15	1,350	9	810
50,000–100,000.........	75	590	44,250	47	3,525	20	1,500	9	675
100,000–250,000........	50	674	33,700	76	3,800	46	2,300	29	1,450
250,000–500,000........	20	439	8,780	93	1,860	48	960	41	820
500,000–1,000,000......	10	380	3,800	94	940	47	470	32	320
Over 1,000,000.........	0	1,051	0	356	0	363	0	197	0
Total...........		4,731	245,000	701	13,365	547	7,380	320	4,375
Bacterial index......		51.8	....	19.1	....	13.5	....	13.7	....

Table No. 16 shows the average bacterial count from the railroad stations, wagons and shops, since 1911, with the exception that in 1911, the wagon and shop samples were grouped together. The lunchroom average is only given for 1913, since milks were only collected from this source during this year. The table also shows the Levy bacterial index, and it can be seen from both of these figures that there has been a marked improvement in the character of the milk from the stations since 1911. The wagon milk has also improved since 1912, but there has been a slight deterioration in the milk of the shops as judged by the bacterial average since 1912.

Table No. 16—*Showing the Average Yearly Bacterial Count of the Milk from Stations, Wagons, Shops and Lunchrooms.*

	1911.	1912.		1913.	
	Average Bacterial Count.	Average Bacterial Count.	Bacterial Index.	Average Bacterial Count.	Bacterial Index.
Station............	2,444,012	2,557,500	24.0	1,070,100	50.9
Wagon............	3,947,892	7,713,500	8.7	3,385,100	21.7
Shop..............	....	6,963,200	13.1	7,780,800	13.5
Lunchroom.......	....	....	....	5,932,600	13.7

EXAMINATIONS FOR LEUCOCYTES AND STREPTOCOCCI IN MILK.

During the year we made 4,837 examinations by the Slack method for the detection of excessive numbers of leucocytes and streptococci in milk collected at the railroad stations. Table No. 17 shows the result of this work in detail. It might be added that in 256 examinations in which the number of leucocytes were over 1,000,000 per cubic centimeter the streptococci were under 1,000,000 per cubic centimeter; in 32 speciments in which the leucocytes were over 1,000,000 per cubic centimeter the streptococci were also over 1,000,000 per cubic centimeter; in 4,044 specimens in which the leucocytes were less than 1,000,000 per cubic centimeter the streptococci were also under 1,000,000 in the same quantity, and in 505 specimens in which the leucocytes were less than 1,000,000 the streptococci were above 1,000,000 per cubic centimeter. When the leucocytes are 1,000,000 per cubic centimeter or above this figure and there is an appreciable number of streptococci present the result is reported to the Chief of the Bureau of Food and Dairy Inspection, who has the herd inspected for garget and other inflammatory conditions of the udder. The results of the sanitary inspection of the herds following these reports are given in the report of the Chief of this Bureau, to which the reader is referred for further information.

TABLE No. 17—*Showing By Months the Results of Examination of Milk from Railroad Stations By the Slack Method.*

MONTHS.	Number Examinations Containing More than 1,000,000 Leucocytes per c. c.				Number Examinations Containing Less than 1,000.000 Leucocytes per c. c.			
	Streptococci Under 1,000,000 per c. c.	Percentage Streptococci Under 1,000,000 per c. c.	Streptococci Above 1,000,000 per c. c.	Percentage Streptococci Above 1,000,000 per c. c.	Streptococci Under 1,000,000 per c. c.	Percentage Streptococci Under 1,000,000 per c. c.	Streptococci Above 1,000,000 per c. c.	Percentage Streptococci Above 1,000,000 per c. c.
January	0	0	0	0	327	89.6	38	10.4
February	0	0	0	0	371	98.4	6	1.6
March	4	0.9	0	0	419	92.3	31	6.8
April	19	3.9	0	0	441	90.9	25	5.2
May	43	9.5	2	0.5	363	80.0	46	1.0
June	18	4.2	2	0.5	376	86.7	37	8.6
July	16	4.2	11	2.9	245	64.3	109	28.6
August	38	8.3	5	1.1	317	69.4	97	21.2
September	35	9.0	6	1.5	297	76.6	50	12.9
October	25	5.6	5	1.1	362	81.6	52	11.7
November	28	10.4	1	0.4	229	85.5	10	3.7
December	30	9.1	0	0	297	89.7	4	1.2

EXAMINATION OF MILK SEDIMENTS FOR THE TUBERCLE BACILLUS.

We have also examined 237 milk sediments, representing milk from 117 dairy farms, for the presence of the tubercle bacillus or pyogenic organisms. These specimens were all obtained from the railroad stations. These examinations were made by the following technique proposed by Kinyoun:

Fifteen cubic centimeters of milk are centrifugalized for one hour; the fluid portion is poured off and cream and sediment thoroughly mixed. Normal salt solution is added to 15 cubic centimeters, and the mixture is well shaken. It is then divided into two parts of 7½ cubic centimeters each. One part is injected untreated subcutaneously; to the other part 0.2 cubic centimeter of antiformin are added and this is brought up to 15 cubic centimeters. This is thoroughly shaken and allowed to stand several minutes, when it is centrifugalized for ten minutes. The fluid portion is poured off and the cream and sediment are mixed with two cubic centimeters of salt solution, and injected intraperitoneally.

In six specimens of milk from four dairy farms the tubercle bacillus was found. This represents an infection by the tubercle bacillus of 3.4 per cent. of the milk from the dairy farms examined. In 15 or 12.8 per cent. of cases the milks from the dairy farms were infected by the Staphylococcus aureus; In 1 or .8 per cent. of instances the milks were infected by the Streptococcus pyogenes, and in another by an organism of the paratyphoid or intermediate group. These results were all reported to the Bureau of Food and Dairy Inspection. One hundred and forty-eight examinations were made for a special piece of work, which is reported elsewhere.

NUMERICAL ESTIMATION OF THE COLON BACILLUS IN MILK.

During the latter part of the year the plan was adopted of noting all of the specimens of milk which contained over 500,000 bacteria per cubic centimeter and making a second examination from the milk obtained from the same source for the numerical estimation of the colon bacillus. When 1,000 colon bacilli per cubic centimeter or over are found in the milk, the Bureau of Food and Dairy Inspection is notified, and a dairy farm inspector is sent with the special order to investigate the conditions which might cause a contamination of the milk by means of manure from barnyards, cow stables, and other sources. If no high colon bacillus count can be detected it is assumed that the high bacterial count is probably caused by poor refrigeration or other bad methods of handling not directly connected with the barnyard and cow stable. During November of the present year, only 15 such counts were made, and in one instance 1,000 colon bacilli per cubic centimeter were detected, but in all of the other cases the counts were less than 1,000 colon bacilli per cubic centimeter.

Examination of Pasteurized and Market Milk for the Presence of the Streptococcus or Pneumococcus.

We examined 88 specimens of milk for the presence of the streptococcus or pneumococcus, and out of 40 samples of pasteurized milk we obtained the pneumococcus once and the streptococcus three times. In 28 samples of market milk the pneumococcus was obtained in one instance, and in eight samples of certified milk the streptococcus was obtained twice. In one case of pasteurized milk the streptococcus and the pneumococcus were obtained. Only one specimen of streptococcus from certified milk proved virulent for mice, and two specimens of the pneumococcus isolated gave a similar result, one being from pasteurized and one from market milk.

Examination of Raw Foods.

During the past year we have examined 34 samples of shucked oysters. These shucked oysters have been collected from the various wholesale houses and examined according to the technique of the Committee on the Bacterial Examination of Oysters of the American Public Health Association. The results have shown a marked contrast between those obtained from the shell stock, and in order that a comparison be made, Table No. 17 will show the results obtained from the shucked oysters which were published in the report for 1912.

TABLE NO. 18—*Oysters (Shell Stock).*

SOURCE.	Date.	Average Bacterial Count.	Score.	Presumptive Test Score.
Rappahannock River	Mar. 3, 1910	1,320	0	2
Patuxent River	Mar. 3, 1910	1,380	2	2
York River, Va.	Mar. 3, 1910	300	1	1
Patuxent River	Mar. 4, 1910	740	0	0
Herring Bay, Anne Arundel Co.	Mar. 9, 1910	2,900	0	0
Patuxent River	Mar. 9, 1910	690	2	2
Potomac River	Mar. 11, 1910	2,100	11	11
Rappahannock River	Mar. 11, 1910	1,450	1	1
West River, Anne Arundel Co.	Mar. 17, 1910	3,200	12	21
White Hall, Severn Run	Mar. 17, 1910	3,200	12	12
Severn River	Mar. 17, 1910	5,000	1	1
Potomac River	Apr. 3, 1910	115	0	2
Herring Bay, Anne Arundel Co.	Oct. 28, 1910	460	12	12
South River	Oct. 28, 1910	20,900	21	21
West River	Oct. 28, 1910	250	32	32
Fishing Bay, Dorchester Co.	Nov. 25. 1910	560	3	3
Tangier Sound, Somerset Co.	Nov. 25. 1910	350	5	5
Herring Bay, Anne Arundel Co.	Nov. 30, 1910	4,100	2	4
York River, Va.	Nov. 30, 1910	1,300	5	5
Chester River	Nov. 30, 1910	2,850	2	3
Hackett's Point	Dec. 10, 1910	1,360	3	3
Chester River	Dec. 10, 1910	8,700	3	3
West River	Dec. 17, 1910	150	2	2
South River, Anne Arundel Co.	Dec. 17, 1910	170	3	3
Herring Bay, Anne Arundel Co.	Dec. 31, 1910	3,500	500	500
Patuxent River	Dec. 31, 1910	7,900	500	500
Herring Bay, Anne Arundel Co.	Jan. 20, 1911	1,220	1	2
Hackett's Point	Jan. 21, 1911	4,600	1	1
Eastern Bay, Talbot Co.	Mar. 31, 1911	11,760	1	3
Patuxent River	Mar. 31, 1911	5,800	1	1
West River, Anne Arundel Co.	Apr. 8, 1911	6,100	5	5
Patuxent River	Apr. 8, 1911	3,200	0	1
Severn River	Apr. 22, 1911	491,400	0	5
Hackett's Point	Apr. 22, 1911	7,380	1	3
Swan Point, Potomac River	Sept. 23, 1911	19,200	1	3
Herring Bay, Anne Arundel Co.	Sept. 30. 1911	25,800	1	2
West River, Anne Arundel Co.	Sept. 30. 1911	31,250	1	2

The shell stock oysters in the above table were obtained at the various city wharves as they arrived from the oyster beds, and the results show that with one or two exceptions the bacterial counts are quite low and the score based upon the presence of the colon bacillus in the oyster juice is also low, almost always being below 50, the score which condemns shell stock according to the ruling of the United States Department of Agriculture.

TABLE No. 19—*Oysters (Shucked).*

Source.	Laboratory Number.	Date.	Average Bacterial Count.	Score.	Presumptive Test Score.
Wholesale house.....	26	Feb. 8, 1913	90,000	50	50
Wholesale house.....	27	Feb. 8, 1913	180,000	50	5,000
Wholesale house.....	28	Feb. 8, 1913	120,000	500	5,000
Wholesale house.....	49	Feb. 15, 1913	600,000	50	5,000
Wholesale house.....	50	Feb. 15, 1913	300,000	50	50
Wholesale house.....	51	Feb. 15, 1913	90,000	500	500
Wholesale house.....	97	Feb. 13, 1913	600,000	5	50
Wholesale house.....	98	Feb. 13, 1913	900,000	50	500
Wholesale house.....	99	Feb. 13, 1913	360,000	0	5,000
Wholesale house.....	120	Feb. 15, 1913	360,000	50	50
Wholesale house.....	121	Feb. 15, 1913	720,000	5	5
Wholesale house.....	132	Feb. 22, 1913	320,000	5,000	5,000
Wholesale house.....	133	Feb. 22, 1913	900,000	500	5,000
Wholesale house.....	209	Nov. 22, 1913	3,600,000	5,000	5,000
Wholesale house.....	210	Nov. 22, 1913	4,800,000	5,000	5,000
Wholesale house.....	211	Nov. 22, 1913	3,600,000	5,000	5,000
Wholesale house.....	212	Nov. 28, 1913	50,000	5,000	5,000
Wholesale house.....	213	Nov. 28, 1913	90,000	500	500
Wholesale house.....	214	Nov. 28, 1913	30,000	5,000	5,000
Wholesale house.....	215	Nov. 29, 1913	600,000	5,000	5,000
Wholesale house.....	216	Nov. 29, 1913	450,000	5,000	5,000
Wholesale house.....	217	Nov. 29, 1913	1,000,000	5,000	5,000
Wholesale house.....	218	Dec. 5, 1913	2,000,000	500	500
Wholesale house.....	219	Dec. 5, 1913	15,000,000	500	5,000
Wholesale house.....	220	Dec. 5, 1913	10,000,000	500	50,000
Wholesale house.....	221	Dec. 6, 1913	50,000	500	500
Wholesale house.....	222	Dec. 6, 1913	4,200,000	5,000	50,000
Wholesale house.....	223	Dec. 6, 1913	200,000	5,000	5,000
Wholesale house.....	224	Dec. 12, 1913	7,000	0	0
Wholesale house.....	225	Dec. 12, 1913	40,000	1,000	1,000
Wholesale house.....	226	Dec. 12, 1913	40,000	50	50
Wholesale house.....	227	Dec. 19, 1913	180,000	50	50
Wholesale house.....	228	Dec. 19, 1913	60,000	50	500
Wholesale house.....	229	Dec. 19, 1913	150,000	500	500

The above table showing the results obtained from shucked oysters, is a marked contrast to the table for shell stock oysters, since the sanitary scores are almost always above 50 and in some cases reached 5,000. The bacterial counts are almost always high, and in a few cases have reached remarkable proportions, showing from 1,000,000 to 15,000,000 bacteria per cubic centimeter.

It is apparent from these results that there is a marked bacterial increase in the shucked stock as compared to the oysters in the shell when obtained from the oyster beds. These high bacterial counts and large numbers of intestinal organisms can be caused by various means, such as taking them from a bed polluted with sewage, floating them in fresh water polluted with sewage, using polluted water to wash the oysters, handling the oysters with unwashed and dirty hands, shucking and packing the oysters in poorly equipped and dirty shucking houses, using improper methods of refrigeration in shipping, and handling the stock in an improper manner after it has arrived in the city. It is of course difficult to say just what causes have contributed to the results obtained, and this can only be determined by a careful sanitary inspection of the methods of production from the oyster bars in the bay to the oyster bars in the city.

TABLE NO. 20—*Oysters (Shell Stock).*

SOURCE.	Laboratory Number.	Date.	Average Bacterial Count.	Score.	Presumptive Test Score.
Chester River	1- 5	Feb. 4, 1913	25,480	21	50
Eastern Bay	6- 10	Feb. 4, 1913	10,620	1	4
White Hall	11- 15	Feb. 4, 1913	15,320	1	4
South River	16- 20	Feb. 6, 1913	2,260	10	10
Kent Shore (Chesapeake River	21- 25	Feb. 6, 1913	19,940	3	3
West River	29- 33	Feb. 11, 1913	28,400	1	3
Holland Point	34- 38	Feb. 11, 1913	37,980	1	3
Annapolis water	39- 43	Feb. 13, 1913	29,120	14	50
White Hall	44- 48	Feb. 13, 1913	58,750	3	23
Mouth of West River	52- 56	Feb. 18, 1913	5,040	2	4
Potomac River	57- 61	Feb. 18, 1913	3,840	2	23
Eastern Bay	62- 66	Feb. 20, 1913	22,240	1	2
Western Shore	67- 71	Feb. 20, 1913	9,100	0	3
Herring Bay	72- 76	Feb. 25, 1913	28,020	12	23
Poplar Island	77- 81	Feb. 25, 1913	5,630	1	3
Pocomoke	82- 86	Feb. 27, 1913	8,500	1	4
Eastern Bay	87- 91	Mar. 6, 1913	15,890	1	5
South River	92- 96	Mar. 6, 1913	3,840	0	5
West River	100-104	Mar. 11, 1913	20,840	2	3
Eastern Bay	105-109	Mar. 11, 1913	2,540	1	14
Eastern Bay	110-114	Mar. 13, 1913	3,040	2	5
Rappahannock River	115-119	Mar. 13, 1913	2,600	14	131
West River	122-126	Mar. 18, 1913	9,900	1	2
Patuxent River	127-131	Mar. 18, 1913	30,360	1	2

The results shown in Table No. 20 of the examination of shell stock during the past year accorded fairly well with those obtained during previous years, and none out of the small number examined showed an actual score high enough to condemn the oysters.

A special examination was made of a lot of five oysters, as it was claimed that these oysters had produced a form of food poisoning in the persons eating oysters from this lot

The examination was negative, however, for any organisms known to produce food poisoning and the sanitary score was within the limits of safety.

TABLE No. 21—*Clams (Shell Stock).*

SOURCE.	Laboratory Number.	Date.	Average Bacterial Count.	Score.	Presumptive Test Score.
Pocomoke Bay............	134-138	Mar. 20, 1913	1,340	0	0
Mobjack Bay..............	139-143	Mar. 20, 1913	3,620	0	3
Hampton Bar..............	144-148	May 9, 1913	7,100	5	5
Pocomoke Bay............	149-153	May 9, 1913	10,700	0	0
Sea Side Clams...........	154-158	May 13, 1913	13,960	0	0
Mobjack Bay..............	159-163	May 13, 1913	1,960	1	1
Clams from the Capes.....	164-168	May 13, 1913	23,000	0	0
York River................	169-173	May 13, 1913	58,440	0	0
Sea Side Clams...........	174-178	May 20, 1913	14,660	0	0
Mobjack Bay..............	179-183	May 20, 1913	4,900	0	0
Sea Side Clams...........	184-188	May 20, 1913	5,020	0	0
Mobjack Bay..............	189-193	May 20, 1913	4,910	0	0
Pocomoke Sound..........	194-198	May 20, 1913	12,600	0	0
York River................	199-203	May 20, 1913	2,280	0	0

The results obtained from the clams in shell stock, as set forth in the above table, show an almost complete absence of intestinal organisms and the results obtained from clams are more satisfactory than those obtained from the oysters.

In the routine investigation of the various kinds of shell fish examined we found a few intestinal organisms of a different type from that of the colon bacillus. From the shell stock we isolated the B. paratyphosus, the B. alkaligenes and the B. cloacae, each in one instance. From the shucked stock we isolated the B. paratyphosus in three instances, and in clams we isolated this organism in one instance. It should be added that the organisms of the paratyphoid type were not examined as to their special agglutinative qualities, nor was any attempt made to classify these organisms. It can only be stated, therefore, that they correspond in their general cultural characteristics to members of the intermediate or hog-cholera group.

ICE.

We examined five specimens of ice and all of these showed a low bacterial count, and none of them showed the presence of intestinal organisms.

EXAMINATION OF RATS FOR THE PRESENCE OF THE BACILLUS OF BUBONIC PLAGUE.

During the year 37 rats which were trapped along the water front by Inspector Kelly were examined by Dr. F. W. Hachtel for the presence of infection by the bacillus of bubonic plague. The examination consisted in a careful dissection of each rat, and if any suspicious signs of plague infection were discovered, careful cultures were made in order to detect the bacillus of bubonic plague. All of these examinations proved negative.

EXAMINATION OF OTHER FOOD PRODUCTS.

Amongst the miscellaneous examinations of various foods may be mentioned the examination of six eggs. None of these contained the colon bacillus in as large a quantity as one cubic centimeter, but the bacterial counts per cubic centimeter were usually quite high, being respectively 500, 1,500, 40,000, 150,000, 180,000 and 800,000 bacteria per cubic centimeter.

During the year we made eight bacteriological examinations of specimens of canned goods, which were reported to the Chief of the Bureau of Dairy and Food Inspection.

Clerical Department.

The report of the Clerical Department, under the supervision of Mr. Harry J. Campbell until the first of June, and then under the supervision of Mr. Harry L. Carman, is presented below. This shows that the total number of laboratory examinations for the past year was 37,931 as compared to 21,906 for the year of 1912. The report in detail follows as Table No. 22.

Table No. 22—*Examinations of Specimens to Determine the Presence of Disease from January* 1, 1913, *to December* 31, 1913.

Diphtheria—	
Positive cultures	1,071
Negative cultures	2,651
Suspicious cultures	13
Unsatisfactory cultures	42
Total cultures	3,777
Positive cultures of school children's throats	102
Negative cultures of school children's throats	975
Suspicious cultures of school children's throats	4
Total cultures of school children's throats	1,081
Positive cultures from throat examined by throat inspector	406
Positive cultures from nose examined by throat inspector	197
Negative cultures from throat examined by throat inspector	3,559
Negative cultures from nose examined by throat inspector	1,063
Total cultures examined by throat inspector	5,225
Tuberculosis—	
Positive results	470
Negative results	1,698
Suspicious results	32
Unsatisfactory results	13
Total results	2,213

TABLE No. 22 (Continued)—*Examinations of Specimens to Determine the Presence of Disease from January* 1, 1913, *to December* 31, 1913.

Typhoid Fever—

Positive reactions	606
Negative reactions	1,504
Suspicious reactions	192
Unsatisfactory reactions	13
Total reactions	2,315

Blood Examined for Paratyphoid—

Positive	106
Negative	357
Suspicious	30
Total reactions	493

Typhoid Bacillus from Blood Cultures—

Positive results	7
Negative results	114
Total results	121

Paratyphoid Bacillus from Blood Cultures—

Positive results	1
Negative results	90
Total results	91

Malaria—

Positive results	5
Negative results	557
Unsatisfactory results	184
Total results	746

TABLE NO. 22 (Continued)—*Examinations of Specimens to Determine the Presence of Disease from January* 1, 1913, *to December* 31, 1913.

Institutions and Hospitals Examined for Diphtheria—	
Positive results	78
Negative results	668
Suspicious results	5
Total results	751

Antitoxin—Units supplied to indigent cases	8,050,000
Tubes of vaccine used during year	96,000
Complete doses of antityphoid vaccine furnished	2,061
Complete doses of antityphoid vaccine returned	124
Miscellaneous examinations	95
Water examinations	1,337
Milk examinations	8,916
Oyster examinations	159
Ice examinations	5
Clam examinations	70
Canned goods examinations	8
Egg examinations	6
Rat examinations for bubonic plague	37
Pasteurized milk sediment for streptococci and pneumococci	88
Examination of milk sediments for tuberculosis	385
Examination of milk for leucocytes and streptococci	4,837
Examination of control cultures for disinfection	5,179
Total number of cultures	37,931

TABLE NO. 23—*Cases of Diphtheria Treated With Antitoxin Furnished by the Health Department from January* 1, 1913, *to December* 31, 1913.

			Extent of Membrane.				Complications.					Cases Immunized.		
Cases.	Deaths.	Mortality.	Tonsils.	Tonsils and Pharynx.	Nasal	Larynx.	Broncho-Pneumonia.	Nephritis.	Sepsis.	Paralysis.	Cardiac Paralysis.	Total.	Successful.	Diphtheria Developed.
365	27	7.4	165	113	29	84	1	2	3	2	4	245	240	5

Cases in which diphtheria bacilli were found....	212	Percentage of mortality....................	20.6
Deaths resulting	13	Cases of laryngeal diphtheria................	84
Percentage of mortality.....................	6.1	Deaths resulting	16
Deaths from nasal diphtheria out of 29 cases....	6	Percentage	19.1

Mortality After Use of Antitoxin According to Duration of Disease at Time of Injection.	1st Day.	2d Day.	3d Day.	4th Day.	5th Day.	6th Day.	7th Day.	8th Day.	10th Day.	2 Weeks.	Unknown.
Cases	90	98	74	33	21	6	9	2	5	5	1
Deaths	6	5	3	3	1	1	3	2	1	2	......
Percentage	6.6	5.1	4.1	9.1	4.7	16	33.3	100	20	40	......

Mortality in cases not treated with antitoxin (Welch)..42.1 %
Average mortality in Baltimore for four years (1894, 1895, 1896, 1897) prior to the use of antitoxin....55.18%

The results of the treatment of patients with diphtheria and of the immunization of persons exposed to this disease are given in Table No. 23, preceding. In 1912 we furnished antitoxin for the treatment of 419 cases of diphtheria, and 29 deaths resulted, a mortality of 6.9 per cent., and in 1913 antitoxin was furnished for the treatment of 365 cases, and 27 deaths resulted, a mortality of 7.4 per cent. In 1912 the diagnosis of diphtheria was verified by cultures from 213 cases in which only 12 deaths occurred, a mortality of 5.6 per cent., and in 1913 the diagnosis was verified in 212 cases and 13 deaths resulted, a mortality of 6.1 per cent. During the year 245 persons were immunized against diphtheria and five later developed the disease. The results in detail from the antitoxin furnished by the Department are set forth in Table No. 23, and the portion of the table at the bottom shows the increase in the percentage of mortality if the administration of antitoxin is delayed.

Distribution of Vaccines.

During the year the Division has distributed 96,000 tubes of vaccine for the prevention of smallpox. This vaccine is not prepared by the Department, however, but is purchased through the Board of Estimates by means of competitive bidding.

The laboratory has also distributed during the year 2,061 complete sets of antityphoid vaccine for the prevention of typhoid fever, and this vaccine is prepared in the laboratory. Six hundred and six sets of typhoid vaccine were furnished to physicians, and 1,455 sets to public institutions.

This vaccine is only furnished when the physician signs the following blank requesting the vaccine for a patient:

APPLICATION BLANK FOR ANTITYPHOID VACCINE.

No........................ *Baltimore*............ ....*19*......

Commissioner of Health,

Dear Sir:

I hereby make application for...
complete doses of Antityphoid Vaccine for use in protecting against typhoid fever for..
residing at... *Age*.................................
I also certify that the above person is healthy and that I shall carry out all of the directions contained in the circular of information.

....*M. D.*
(Applicant)

This application blank must be signed by the family physician before vaccine will be given out.

Along with the vaccine the following directions are issued in order to prevent any improper use of this material:

DIRECTIONS CONCERNING THE USE OF THE PREVENTIVE VACCINE FOR TYPHOID FEVER.

This package contains three ampuls of antityphoid vaccine, to be administered in doses of 250,000,000, 500,000,000 and 1,000,000,000, at intervals of 7-10 days between doses.

Sterilize syringe, shake ampul thoroughly and place it in 1 to 1,000 bichloride or 5 per cent. carbolic acid for five minutes, break off neck where it is etched and flame broken edge with an alcohol lamp or match; draw contents into syringe and inject into the arm, which has previously been scrubbed with soap and water, dried and painted at site of inoculation with Tr. iodine diluted with an equal quantity of alcohol. The injections should be made deep under the skin by pinching up a fold, but not into the muscle. After the injection the site should again be painted with the before-mentioned diluted Tr. iodine.

Inoculations should be made into alternate arms, and a new site should be selected for each injection in the region of the insertion of the deltoid muscles.

If any of the vaccine has ascended into the neck of the ampul, take the neck between the thumb and finger, bulb end downward, give it one or more quick flings, such as you would use in shaking down the mercury in a clinical thermometer, until the neck is cleared of fluid.

Notice.

Before injecting the preventive vaccine for typhoid fever the physician or health warden should explain to the person to be inoculated that the injection is apt to produce an area of redness and local pain at the seat of inoculation. The arm may also become painful, and remain so for about twenty-four hours, and occasionally the glands in the armpit may become slightly swollen and tender. A slight or moderate constitutional reaction consisting of malaise and a rise of temperature may also follow one or all three of the injections, but all of these symptoms will usually disappear within twenty-four hours. Severe reactions are of rare occurrence; untoward results have never occurred. It is best to inject the vaccine in the late afternoon, if possible, so that the person inoculated may rest during the night following the inoculation. No active exercise should be taken, such as long walks, for twenty-four hours after the injection. The vaccine should not be administered at intervals of more than seven to ten days. It should be promptly returned if it has been kept longer that the date of expiration marked on the ampul.

The typhoid vaccine should not be given to anyone who has had typhoid fever within the past seven years, nor should it be given to anyone having sugar or albumen in the urine, cardiac lesions, arteriosclerosis or any serious chronic disease. No alcoholic beverages should be taken on the day of the inoculation. The vaccine should not be used if the individual has any fever, and this should be determined by the use of the clinical thermometer.

Any prophylactic remaining unused should be thrown away and a fresh vial opened for each day's use. It should be stored in the ice-box.

This prophylactic is well borne by children and by women, using doses proportionate to the body weight, taking one hundred and fifty pounds as the unit. Women should not be given the first dose during or near the time of the menstrual period.

The prophylactic will keep for six months and perhaps longer when it is stored at a low temperature in the dark, but it is desirable to administer it as soon after its preparation as is consistent with complete and thorough tests of its purity and sterility.

The Widal reaction is always positive after typhoid prophylaxis; it appears in about ten days after the first dose and remains positive for six months to a year. This fact must be considered in diagnosing typhoid in immunized persons; they give a positive Widal regardless of the nature of the illness, and the reaction is consequently of no assistance in making a diagnosis.

The following circular is also sent out to physicians:

Circular of Information Concerning the Proper Interpretation of the Various Laboratory Tests Made by the Sub-Department of Health.

In order to obtain the best results in the interpretation of laboratory results given out by the Sub-Department of Health, there are a few points which should be considered in the use of these various tests. The results of these tests should always be considered in combination with the various clinical symptoms, and the clinical symptoms and physical signs should be given due weight in making a diagnosis. The diagnosis, therefore, should depend upon the evidence as furnished by the laboratory findings, as well as by the various physical signs and clinical symptoms. The following statement should be made concerning the use of the various laboratory tests for the several infectious diseases:

Diphtheria.

When a positive result is obtained in diphtheria the case should be treated as such, and it should be borne in mind that this disease not infrequently assumes a very mild form and that occasionally the diphtheria bacillus may be present in a case of ordinary sore throat, although it may not produce any special symptoms.

When a negative report for diphtheria is received and the clinical symptoms are those of diphtheria, the case should be treated and reported as diphtheria, since it is possible to miss the diphtheria bacillus occasionally, even when a careful swabbing of the infected area is made. Then again, the swab may not have touched the membrane itself, or the diphtheria bacillus may be beneath the surface in the meshwork of the membrane. A negative report for diphtheria should never supersede a well-grounded belief of a physician that this disease exists. This is especially true in cases of laryngeal diphtheria, when the swab itself does not come in direct contact with the membrane, which is often found only below the epiglotis.

Tuberculosis.

A positive report in tuberculosis for all practical purposes means that the disease exists. When a negative report is received, however, it should be borne in mind that the tubercle bacillus is frequently not found in the first examination of the sputum, although the disease exists and the tubercle bacillus is found in subsequent examinations. Frequent specimens should be sent for examination in cases of negative reports from suspicious cases of tuberculosis, and where the suspicion still remains the Department will be glad to inoculate animals in order to clear up any doubt. Here, again, the clinical symptoms should be given due weight and the use of tuberculin as a diagnostic agent should be employed where other methods fail to give positive results in suspicious cases.

Typhoid Fever.

It is in this disease especially where the clinical symptoms and physical signs should be given a most careful consideration. A positive typhoid reaction in the vast majority of cases means that the case is either one of typhoid or paratyphoid infection, but a few rare instances have been reported in which a typhoid reaction was apparently obtained in other diseases. The source of error from this cause, however, is very slight. A positive typhoid reaction may, however, be due to a previous unrecognized attack of typhoid fever and it may remain for several years after the patient has been inoculated with antityphoid vaccine. A positive reaction, therefore, should only be considered as a very important part of the evidence, and should be weighed in combination with the clinical symptoms and physical signs before a final conclusion is reached.

A negative report of course does not mean that the case is not one of typhoid fever, as the positive reaction does not usually occur until the end of the first week; at times is delayed until convalescence, and occasionally does not appear at all in the course of the disease. A case showing the clinical symptoms of typhoid fever should be considered and reported as such, even though the Widal reaction remains negative.

Blood Cultures in Typhoid Fever.

This would seem to be the best and earliest method of recognizing typhoid fever, and the Department of Health furnishes a complete outfit for obtaining blood cultures. The results obtained from this method in practice have been somewhat disappointing, but it is believed to be partially due to the fact that not enough blood is placed in the bile tubes. The most accurate method would be to obtain about thirty drops (two cubic centimeters) from a vein under aseptic precautions, allowing this much blood to flow into the bile tube through the hypodermic needle. If this is not possible to accomplish, from fifteen to thirty drops of blood should be allowed to flow into the bile tube. The blood culture should be made preferably during the first week of the disease, since the typhoid bacillus is present in the blood in about 90 per cent. of cases during the first week of the disease. After this the percentage of positive tests decreases.

When a positive typhoid reaction is obtained and a later negative report is received for the actual isolation of the typhoid bacillus from the blood, such reports should not be considered as contradictory. Sometimes the typhoid bacillus is isolated from the blood, while the typhoid reaction is still negative, and at times the contrary is the case. The positive test by either method should be regarded as sufficient.

Malaria.

A positive report of malaria is conclusive, but a negative report may be due to the fact that quinine has been given and the organisms have practically disappeared from the blood, or that they were too scarce to detect in the examination. A careful examination is always made of every cover slip which is properly prepared. We obtain a large number of cover slips smeared with blood for malarial examination which are impossible to examine, owing to thick smears and other improper methods of preparing the specimen.

In summarizing this matter, it might be stated that laboratory tests form a very important part of the evidence which should be weighed in making a clinical diagnosis. Allowances should be made for occasional sources of error, and the clinical signs and physical symptoms should be given due weight, even in the absence of a confirmatory report from the laboratory.

Respectfully,

WM. ROYAL STOKES, M. D.,
Bacteriologist.

Accompanying the antityphoid vaccine, a clinical information blank is also given out, and physicians are expected to return this clinical blank after the treatment, giving full information as to the result of the injection of antityphoid vaccine. The following table shows the various symptoms which were obtained from the use of the vaccine by physicians and the details of these results can be seen by an examination of the table.

TABLE NO. 24—*Showing the Symptoms Obtained from the Injection of Antityphoid Vaccine by Physicians.*

Total number of clinical blanks returned		240
Total number showing no reaction		17
Total number showing reaction		223
Local reaction		223
Redness	223	
Pain	206	
Swelling	202	
General reaction		155
Malaise	155	
Fever	145	
Headache	127	
Chills	52	
Temperature observed		84
Maximum temperature		104.0
Minimum temperature		98.6
Average temperature		100.5
Dose showing general reaction		129
First dose	129	
Second dose	120	
Third dose	93	
Dose showing most severe reaction		62
First dose	62	
Second dose	61	
Third dose	45	

REPORT OF THROAT INSPECTORS.

The report of the throat inspectors shows that 5,225 cultures were taken by the throat inspectors, Dr. W. P. Stubbs and Dr. B. P. Herzog, during the year, and of these, 603 were positive for diphtheria. The results of their examination of nasal cultures, and other interesting data are set forth in the separate report which follows at the end of my report. The large number of positive nasal cultures in which the throat cultures are negative again emphasizes the importance of passing a regulation that physicians must obtain negative cultures from the nose of the patient as well as the throat, and negative cultures from the noses of carrier or contact cases as well as the throat before such cases are released from quarantine.

Distribution of Supplies to Culture Stations.

The report of Mr. Harry Rush, distributor and maker of culture supplies, shows that 27,349 culture outfits were distributed during 1913. In addition to the distribution of culture outfits, Mr. Rush keeps a record of the various outfits distributed, collected and returned, and notifies the culture stations by postal to return all unused outfits. In addition to the 129 official culture stations there are about 65 sub-stations where the pharmacists send for their own culture outfits, and there are also a large number of institutions and hospitals which are furnished with similar materials.

REPORT OF THE DISTRIBUTION OF CULTURE OUTFITS FOR 1913.

Number of culture tubes distributed	20,944
Number of culture tubes brought back	10,647
Number of culture tubes used and sent to the Department	4,042
Number of typhoid boxes distributed	2,773
Number of typhoid boxes used and sent to the Department	2,315
Number of miscellaneous outfits distributed	99
Number of miscellaneous outfits used and sent to the Department	77
Number of sputum outfits distributed	3,418
Number of sputum outfits used and sent to the Department	2,201
Number of combined blood, urine and feces culture outfits distributed	115
Number of combined blood, urine and feces cultures used and sent to the Department	136

The Collection of Various Samples of Raw Foods.

The examination of the various specimens set forth below in the table is made for obtaining an idea of the condition of many of the raw and refrigerated foods. Mr. Edward F. Kelly, the special laboratory collector, has collected 2,949 specimens of the various raw and refrigerated foods, and the results of these examinations are described in other portions of this report. He has also visited 2,323 dairies, stores, and dwellings, and his work in detail is set forth in the table which follows.

REPORT OF LABORATORY COLLECTOR FOR THE BACTERIOLOGICAL AND CHEMICAL LABORATORIES.

	No. of Specimens.
Water, city	1,263
Water, lake	25
Water, table	48
Water, pump	19
Water, spring	28
Water, filtered	12
Water, wash	4
Water, artesian wells	6
Milk, before pasteurization	339
Milk, after pasteurization	339
Milk, original package	721
Cream	50
Ice, artificial	3
Oysters, shell	39
Oysters, shucked	34
Clams	19
Total	2,949

Number of dairies visited	339
Number of dwellings visited	1,263
Number of wagons	721
Total	2,323

EXAMINATION OF CONTROL CULTURES FOR DISINFECTION OF HOUSES AFTER COMMUNICABLE DISEASES.

During the year we examined 5,179 control cultures sent in by citizens from rooms which had been disinfected by the Department. Of these cultures, 4,860 were proven to have been destroyed by the disinfection by means of formaldehyde gas, and 319 specimens were not destroyed. This shows that the great majority of rooms disinfected by means of formaldehyde were given a thorough surface sterilization by means of this method.

SUMMARY.

The results of the examination of the water supply during 1913 show that the bacterial reduction was quite variable during the earlier months of the year, and that at times there was even a bacterial increase, due to the presence of aftergrowths. The bacterial reduction in the storage reservoirs was not constant even during the latter months of the year, but from September to the end of the year there was a decided drop in the number of bacteria present in the tap water. This was due to an increase in the amount of calcium hypochlorite added to equal 2.0 parts of available chlorine per million parts of water, and the good results continued, even though the amount of hypochlorite was gradually lessened again for the Gunpowder supply until it equalled 1.5 parts of available chlorine per million parts of water. The increase in the amount of available chlorine has also practically destroyed the intestinal organisms in the drinking water. The purification of the drinking water had quite an effect in reducing the typhoid fever for most of the months of the year, but during July, August and September, there was a relative increase of typhoid cases which rather abruptly decreased after the increase of the amount of hypochlorite added to the water. The various tables and the text describe these matters in detail.

Table No. 4 shows the amount of residual chlorine in the drinking water when the greatest amounts of calcium hypochlorite were being used, and the third set of columns shows that when 1.5 parts of available chlorine were finally employed the residual chlorine practically disappeared from the drinking water.

Table No. 5 shows the various amounts of water consumed from the Gunpowder supply and the Jones Falls supply, and indicates that a very large percentage of the total amount is either obtained from the Gunpowder water alone or the Gunpowder water mixed with Jones Falls water.

The results of the examinations of wells and springs, both in specimens obtained in the city and in those obtained from the dairy farms are described in the text, and the results of various table waters sold in the city are also described. The special examinations made for citizens for various causes can also be found following the subjects mentioned above.

The report shows that 8,916 bacteriological examinations of milk were made during the year, 4,731 being collected from the various railroad stations, 701 from wagons, 547 from shops, 320 from lunchrooms, 445 from specimens obtained at the plant after pasteurization, 380 specimens from milk collected at the pasteurizing plant before pasteurization, 857 original package samples of pasteurized milk, 350 specimens in which special examinations for streptococci and leucocytes were made, and 585 specimens of a miscellaneous nature.

The various tables found in the text show the comparison by months of the milk collected from railroad stations, that collected from wagons, that collected from stores and dairies, that collected from lunchrooms, that collected from the milk contest held by the Maryland State Dairymen's Association, that collected from the various pasteurizing plants and that collected from the pasteurized milk as sold to customers. The results are expressed by means of the Levy bacterial index and it can be seen that there is a deterioration in the milk from the time that it leaves the railroad stations until it is sold from the stores, dairies and lunchrooms. Table No. 5 also demonstrates this fact in a graphic manner, and Chart No. 6 shows the relation between the mean monthly temperature and the bacterial contamination of milk, the number of bacteria present being much greater during the warmer months.

Table No. 15 shows the yearly record of the milk collected from the railroad stations, wagons, shops and lunchrooms, and the high bacterial index for the station milk shows that the bacterial count is lower in such milk than that obtained from the other sources described in the table.

Table No. 16 is instructive, as showing the general tendency towards the improvement of the milk supply since 1911, although the data for comparison are incomplete from the shop and lunchrooms, and there is one slight increase for the shop samples during 1913.

The results obtained in the examination of milk for excessive number of leucocytes and streptococci are interesting, and the practical results obtained from inspections are described in the report of Dr. Frederick C. Blanck, Chief Chemist of the Bureau of Dairy and Food Inspection. The examination of milk sediments for the tubercle bacillus shows that in only 2.5 per cent. of the examinations were we able to obtain evidence of the bovine tubercle bacillus in market milk. These results were reported to the Chief of the Bureau of Dairy and Food Inspection, and the practical results obtained from these examinations are described in his report.

The same may be said concerning the results of the numerical estimation of the colon bacillus in milk.

A few samples from pasteurized, market and certified milk were examined for members of the pneumococcus-streptococcus group, and the results are described under this heading.

The difference between the results obtained from shell stock oysters and those obtained from shucked oysters is very striking and shows that many samples of the shucked oysters gave higher bacterial counts and higher sanitary scores than the shell stock.

The results obtained from clams of shell stock show remarkably low sanitary scores in all cases, although the bacterial counts are often quite high. It is not proven, however, that the high bacterial counts in oysters and clams have any relation to the sanitary quality of the oysters and clams.

The examination of ice and other food products is described in the text, and the examination of rats for the presence of bubonic plague is also described.

The report of the Clerical Department shows the work of the laboratory in detail, and Table No. 23 shows the results obtained from the antitoxin dispensed by the Department. A mortality of 6 per cent. in cases proven to be diphtheria by cultures was obtained for the year, and this is quite encouraging when compared to the average mortality of 55 per cent. in Baltimore before the use of diphtheria antitoxin was instituted.

Quite a large number of tubes of anti-smallpox vaccine virus have been distributed from the laboratory, and a certain number of sets of anti-typhoid vaccine have also been given out. The method employed in the distribution of this preventive against typhoid fever and the results obtained from its use are described in the text.

The report of the throat inspectors shows the large number of examinations made from convalescent and contact cases in quarantined houses, and the report of the distribution of culture supplies to culture stations and of the collection of various samples of raw foods shows the value of these subdivisions to the Department.

The results of the examination of control cultures for disinfection show that a complete surface disinfection was obtained from most of the rooms in which disinfection was practiced.

In conclusion, I desire to thank Drs. F. W. Hachtel, H. W. Stoner, W. J. Schmitz, Messrs. Raymond Freas, Fred Berger, Harry J. Campbell, Harry L. Carman, Edward Kelly and Harry Rush, and Miss L. R. Sullivan, for the faithful performance of their duties. I also wish to commend the good work of the laboratory assistants, Miss H. L. Folks, Arnold Gunther, Frank Orban, Claude Van Bibber and Lee Clark, and to thank Mr. Raymond Freas for great assistance in preparing this report.

Respectfully submitted,

WILLIAM ROYAL STOKES,
Director of Division of Bacteriology.

ANNUAL REPORT

OF THE

THROAT INSPECTORS

Report of the Throat Inspectors.

BALTIMORE, January 1, 1914.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

We herewith submit a report of the work done in that division of your Department under our charge for the year ending December 31, 1913.

In all, there were 8,975 cultures taken after diphtheria, for fumigation; of these, 3,750 were taken by the attending physicians and 5,225 by the Inspectors of Throats representing this Department.

TABLE No. 1—*Cultures Taken by Attending Physicians.*

1913.	Negative.	Positive.	Totals.
January	266	74	340
February	247	80	327
March	317	128	445
April	187	47	234
May	167	31	198
June	170	47	217
July	88	28	116
August	82	37	119
September	138	74	212
October	218	155	373
November	389	205	594
December	408	167	575
Totals	2,677	1,073	3,750

TABLE NO. 2—*Cultures Taken by Throat Inspectors.*

1913.	Negative.	Positive.	Totals.
January	359	49	408
February	368	27	395
March	368	34	402
April	233	24	257
May	169	24	193
June	130	8	138
July	191	3	194
August	152	22	174
September	271	32	303
October	708	165	873
November	870	114	984
December	803	101	904
Totals	4,622	603	5,225

TABLE NO. 3—*Total Number of Cultures Taken for Fumigation.*

1913.	Negative.	Positive.	Totals.
January	625	123	748
February	615	107	722
March	685	162	847
April	420	71	491
May	336	55	391
June	300	55	355
July	279	31	310
August	234	59	293
September	409	106	515
October	926	320	1,246
November	1,259	319	1,578
December	1,211	268	1,479
Totals	7,299	1,676	8,975

The striking difference in the percentage of positive cultures taken by attending physicians for disinfection over those taken by the Inspectors of Throats is due to the fact that in most instances the attending physician takes a culture from the throat of the patient only, with the request that if the culture be found free from diphtheria bacilli the Department takes the cultures from the other inmates of the infected house. So, in a large majority of cases, this Department takes a culture from the throat of the patient after the throat has already been proven free of diphtheria bacilli.

Believing that in a large percentage of the diphtheria cases the organism could be found in the nose as well as within the throat, we have during the past two years made it a rule to take a nose as well as a throat culture from the patient only. Of these nose cultures, 1,260 were taken, of which 1,063 were negative and 197 positive. This result shows that over 15 per cent. of the patients convalescent from diphtheria and reported to this Department as well by the attending physician still harbor diphtheritic germs in their anterior nares, and upon investigation we find that in about 10 per cent. of the above positive nose cultures the throat culture taken at the same time was negative.

We believe that the very high percentage of positive nose cultures would seem to indicate the necessity of a routine examination of a diphtheritic patient's nose as well as his throat before lifting the quarantine, and would respectfully offer this suggestion to apply to the cultures taken by the attending physician as well as those taken by the throat inspectors.

We believe from the above statistics and from experience that one negative culture from a throat is by no means positive evidence that diphtheria germs are not present. If practicable, two negative cultures from both nose and throat should be taken on two successive days. The percentage of error in culture taking, we think, is high enough to justify this regulation. The principal causes of error in culture taking are: carelessness, or in an intractable child, inability to touch with the swab every part of the throat.

A culture taken from the surface of the throat may be negative, due to an antiseptic gargle or spray; again, the germs may be only lodged in the follicles or crypts of the tonsils. After some little time the germs may be squeezed out of the follicles (as after eating) and again appear in the throat, at which time we would get a positive culture.

The germs may be in the anterior or posterior nares at the time the culture was taken and the throat negative, and a culture taken the next day would give a positive result.

The swab may not be rubbed and twirled carefully enough over the blood serum.

The blood serum may not be slanting enough to catch every part of the swab as it is twirled, and in this way the germs may remain on the swab and never come in contact with the blood serum.

Bad or dry media.

A swab already contaminated by careless handling.

Incubator trouble may delay the growth.

Unavoidable errors in staining and examining.

In view of the above causes, some of which are unavoidable, while others may be due to negligence or carelessness, we respectfully submit for your approval the necessity and practicability of this Department requiring two negative cultures from both nose and throat of a diphtheritic patient before that patient is released.

It seems that during this year the diphtheria germ had an unusual virulence. We have noticed more than the usual percentage of positive cultures, and by referring to last year's report you will see that during the year 1912, 623 cultures in all were found to be positive; while in the year 1913, 1,676 cultures were found to be positive. We would also call to your attention the increase in the amount of work for the year 1913. In 1912, 5,008 cultures were taken in all, while in 1913, 8,981 cultures were taken in all.

Respectfully submitted,

W. P. Stubbs, M. D.,
B. P. Herzog, M. D.,
Throat Inspectors.

ANNUAL REPORT

OF THE

Division of Food and Dairy Inspection

Report of the Division of Food and Dairy Inspection.

BALTIMORE, January 2, 1914.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

I respectfully submit herewith a report of the work accomplished in the Division of Food and Dairy Inspection during the year ending December 31, 1913.

MILK.

The amount of milk received at the various railroad depots during the year was 9,345,860½ gallons, an increase of 482,991⅝ gallons over the amount received during 1912. The average amount produced daily within hauling distance of the city was approximately 6,000 gallons. These figures give an approximate average daily consumption of 31,600 gallons, an increase of 1,300 gallons over the daily consumption of 1912. Table No. I shows the amount of milk received each month at the various railroad stations during 1912 and 1913. The data in this table has been furnished through the courtesy of the various railroad companies.

TABLE NO. I—*Showing the Amount of Milk in Gallons Received Each Month at the Various Railroad Stations During 1912 and 1913.*

MONTHS.	B. & O. R. R. Camden, Gay St., and Mt. Royal Stations.		Md. & Pa. R. R. Oak St. Station.		W. M. R. R. Hillen Station.		W. M. R. R. Fulton Station.
	1912	1913	1912	1913	1912	1913	1912
January	82,905	88,785	180,673	200,477	99,587	131,925	110,650
February	83,690	77,530	176,566	184,444	100,748	102,351	111,940
March	91,260	96,295	194,239½	213,778	108,334	112,768	117,867
April	93,260	101,320	197,659⅜	221,242	88,967	84,385	137,242
May	117,000	132,055	233,255	258,888	111,715	107,400	162,863
June	111,960	124,590	222,224	244,796	126,638	114,113	184,346
July	102,940	109,580	203,650	226,871	92,131	101,594	206,564
August	100,120	112,480	198,328	226,164	133,216	114,837	179,849
September	95,795	103,065	187,162	224,469	103,986	104,341	147,360
October	91,970	95,175	188,929	229,139	96,149	104,811	132,936
November	82,590	85,280	181,075	214,324	88,016	89,711	119,643
December	81,095	88,170	187,644	227,565	81,052	101,039	114,396
Total	1,134,585	1,214,325	2,351,404⅞	2,672,157	1,230,539	1,268,645	1,725,656

TABLE No. I (Continued)—*Showing the Amount of Milk in Gallons Received Each Month at the Various Railroad Stations During 1912 and 1913.*

MONTHS.	W. M. R. R. Fulton Station.	N. C. R. R. Calvert Station.		N. C. R. R. President St. Station.		Monthly Totals for All Railroads.	
	1913	1912	1913	1912	1913	1912	1913
January	145,869	169,031	174,674	15,340	10,776½	658,186	752,496½
February	113,711	165,653	167,432	15,343	9,984	653,940	655,452
March	122,917	195,043	190,260	10,030	11,436½	716,773½	747,454½
April	129,953	180,516	190,644	12,171½	12,579½	709,815⅞	740,123½
May	156,589	216,295	219,137	15,220	17,651	856,348	891,720
June	166,604	214,663	209,290	16,205	18,474½	876,036	877,869½
July	173,725	207,542	204,308	15,872½	17,816½	828,699½	833,894½
August	195,523	208,220	203,191	15,446	16,816½	835,179	869,011½
September	148,164	194,616	184,724	12,658	14,093	741,577	778,856
October	133,070	183,023	183,613	11,766½	13,100½	704,773½	758,908½
November	119,702	161,586	170,560	10,723	11,832	643,633	691,409
December	142,566	162,892	177,457	10,828½	11,870	637,907½	748,667
Total	1,748,393	2,259,080	2,275,290	161,604	166,430½	8,862,868⅞	9,345,860½

Dairy Farm Inspection.

Prior to January 1, 1913, no systematic farm inspection could be made, and so the vast majority of farms shipping milk to Baltimore were uninspected. On January 1, 1913, three dairy farm inspectors were appointed. Before beginning actual inspection work these three men were given a thorough course of instruction in city milk inspection and laboratory methods. This period of preparation was supplemented by a four weeks' course in practical dairying at the Agricultural High School at Sparks, Md. This preliminary training proved invaluable in our efforts to improve the conditions under which milk is produced for the Baltimore market. Even with this force of men, however, it has not been possible to visit all the farms shipping milk to Baltimore. The total number of farms shipping milk to the city was 1,968, of which 1,098 were visited by our inspectors. Of this number 989 shipped milk only; 29 shipped cream only, and 80 were creamery patrons whose products were later shipped to the city. The average score of these farms was 50.84. This score is considerably higher than the average score in 1912, which was 43.54.

Table No. II shows the classification of these farms according to scores. It is interesting to note that 74 per cent. of the farms visited scored between 40 and 60 on the first inspection. This condition is decidedly hopeful, as it will not require much effort on the part of these owners to increase their scores from 10 to 20 points higher, and also to accomplish the same without any considerable expenditure of money.

TABLE No. II—*Showing the Grouping of Dairy Farms by Score.*

	Number.	Percentage.
Score over 80	7	0.64%
Score between 70 and 80	17	1.53%
Score between 60 and 70	109	9.92%
Score between 50 and 60	417	37.97%
Score between 40 and 50	405	36.92%
Score between 30 and 40	74	6.76%
Score between 20 and 30	6	0.53%
Score below 20	4	0.36%
Where score could not be completed	59	5.37%
Total	1,098	100.00%

The following summary gives the results of these inspections:

Number of milk-shipping farms visited	989
Number of cream-shipping farms visited	29
Number of creamery patrons visited	80
Total number of farms visited	1,098
Number of second, third and fourth visits	301
Number of special investigations, caused by complaints, or by a bacteriological analysis of milk suggesting bad conditions	149
Total number of inspections	1.548

Milk Producing Farms.

Number of cows examined	12,681
Number of gallons of milk shipped daily	21,365
Average number gallons per cow	1.685
Average number gallons per farm	21.59
Average number cows per farm	13

Cream Producing Farms.

Number of cows examined	527
Number of gallons of cream shipped weekly	1,105
Average number of gallons per cow per week	2.096
Average number of gallons per farm per week	38.10
Average number of cows per farm	18

Creamery Patrons.

Number of cows examined	804
Number of gallons of milk sent to creamery daily	1,458
Average number of gallons per cow	1.813
Average number of gallons per farm	18.22
Average number of cows per farm	10
Number having tuberculin tested herds, 33	3.0 %
Number having small-top milk pails, 104	9.05%
Number having coolers, 43	4.00%
Number having no dairy house, 266	24.22%
Maximum score	88.00
Minimum score	12.45
Average score	50.84

In addition there were six creameries inspected which shipped a total of 500 gallons of cream to the city daily.

The above summary clearly indicates certain details of farm conditions which demand our closest attention. The percentage of farms having tuberculin tested herds is exceedingly small. It is hardly necessary for me to discuss the danger of using milk from herds infected with tuberculosis, nor is it necessary for me to discuss the economic side of this important question.

Only 9 per cent. of the farms inspected are using small-top milk pails. The use of this type of pail is a practical necessity where milk of low bacterial standard is desired. The percentage of farms inspected which have no dairy house is excessive. Unless adequate facilities are provided for the handling of milk subsequent to milking, it is difficult to prevent re-contamination of the milk. These facilities can best be furnished on the farm by a properly equipped dairy house.

In the course of our dairy farm inspection work, a considerable number of photographs have been taken, illustrating conditions and methods in use on the producing farms. These photographs are exceedingly instructive and well illustrate the many phases of the problem encountered in our daily work.

Whenever a laboratory analysis of milk showed that bad conditions existed on the producing farm, either in the handling of the milk or in some diseased condition of the herd, special investigations were made by our inspectors. In all, 149 of such special investigations were made. These investigations resulted in the temporary exclusion of milk from 251 cows and the permanent exclusion of the milk from seven cows. As a further result, the entire output of five farms was excluded, owing to insanitary conditions existing thereon. In addition to these investigations, six special investigations were made on account of the prevalence of contagious or infectious diseases on the farms. As a result of these investigations the milk from one farm was temporarily excluded from Baltimore city.

We have received daily from the State Board of Health a report of all contagious and infectious diseases occurring in those counties of the State from which milk is shipped to Baltimore. These reports have been of great value to us in checking up the prevalence of these diseases on our milk producing farms.

Acknowledgment is hereby made of the promptness of the State Board of Health in forwarding these reports and of the material assistance which they have rendered in this phase of our work.

The number of nearby farms hauling milk to the city was materially reduced during the year 1913. At the end of the year there were only 116 of such farms. The reduction in the number of these farms is probably due to a number of causes; such as the expansion of the city, increased cost of feed and greater restrictions on the character of feed used by many of these places.

As suggested in our report for 1912, a regulation was formulated by the Commissioner of Health prohibiting the feeding of certain foodstuffs to dairy cows. The following is a copy of this regulation:

Dear Sir:

Your careful attention is directed to the following regulation which I have established governing the production and sale of milk intended for consumption in Baltimore city:

No person or corporation shall keep or have in his or its possession any slops or refuse of any distillery, brewery or vinegar factory, or any mash or refuse, or any canning factory refuse, or food that has been subjected to fermentation, for the purpose of feeding the same to any milk cow or cows.

The above regulation is effective on and after July 1, 1913, and all milk from cows fed on the above foods will be regarded as impure within the meaning of the laws governing the sale of milk in Baltimore city.

Nathan R. Gorter,
Commissioner of Health.

The necessity for such a regulation must be apparent to anyone who visits establishments where such feeding is practiced. The sanitary conditions, even under the best of conditions, are bad and are absolutely inimical to the production of clean milk. This practice has been in existence for many years and consequently the passage of such a regulation created a tremendous stir among this class of milk producers.

On October 17, injunction proceedings were instituted by these producers to restrain the Commissioner of Health from enforcing this regulation. Unfortunately, this case has not been tried as yet and so we have been unable to enforce this necessary regulation.

TABLE NO. III—*Showing Cow Stable Inspection, by Months, During* 1913.

MONTHS.	Stables Inspected.	Cows Examined.	Cows Condemned.
January	133	2,231	1
February	131	2,225	3
March	151	2,206	....
April	162	2,637	....
May	186	2,624	....
June	135	2,773	....
July	159	3,644	....
August	161	4,204	....
September	167	4,234	....
October	155	4,278	....
November	100	2,958	....
December	139	3,491	....
Total	1,779	37,505	4

CITY MILK WORK.

The store problem still continues to be one of our great problems in the local distribution of milk. Constant inspection and supervision are required, as many of the store owners do not seem to comprehend the meaning of the word "cleanliness," nor have they any idea as to the necessity for proper care in the handling of milk. These problems are still further increased by the large number of foreigners operating stores.

The problem of dispensing bulk milk in these stores is an ever present and serious one. Until we have adequate laws controlling the sanitary condition of these establishments and a law prohibiting the sale of dipped milk, it will be exceedingly difficult for us to improve these conditions.

During the year a new form of score card was introduced for recording the results of our inspection of stores. This score card is modelled after the standard government score card and should prove of value to us in recording existing store conditions.

Attention must again be directed to the small dairy problem in so far as it concerns their equipment or lack of equipment for the proper handling of milk. The details of our local dairy inspection are given in our 1912 report. In general the conditions in these dairies were practically the same in 1913. Here again it is necessary for us to have adequate laws which will compel all dairies to have at least a certain minimum equipment before being licensed to operate as dairies.

An important advance was made during the year in our procedure involved where permits have been revoked. Heretofore after a milk permit had been revoked, it was merely necessary to make application for another permit, and, if conditions were satisfactory, another permit was granted. By this old method the person could readily become a chronic offender against our milk regulations, and yet not be made to suffer. Under the new procedure, after a permit has been temporarily revoked twice for violations or infractions of our rules and regulations, a notice is sent to the offender to appear before the Commissioner of Health on a certain day to show cause why this revocation of his permit should not be made permanent on and after a certain day. At these hearings opportunity is given to the Department and also to the accused to present both sides of the case. After hearing all the evidence in the case, the Commissioner of Health passes judgment.

In accordance with this new method 13 revocations for the sale of milk and cream were made permanent. In addition to these, there were 187 temporary revocations of milk permits for various infractions of the Department rules and regulations. The number of milk permits effective December 31, 1913, was 3,430, divided as follows: local dairies, 211; dairies in the county, 29; county producers vending milk in the city, 116; stores and lunchrooms, 3,074.

Chart No. 1 graphically illustrates the difficulties surrounding the local distribution of our milk supply.

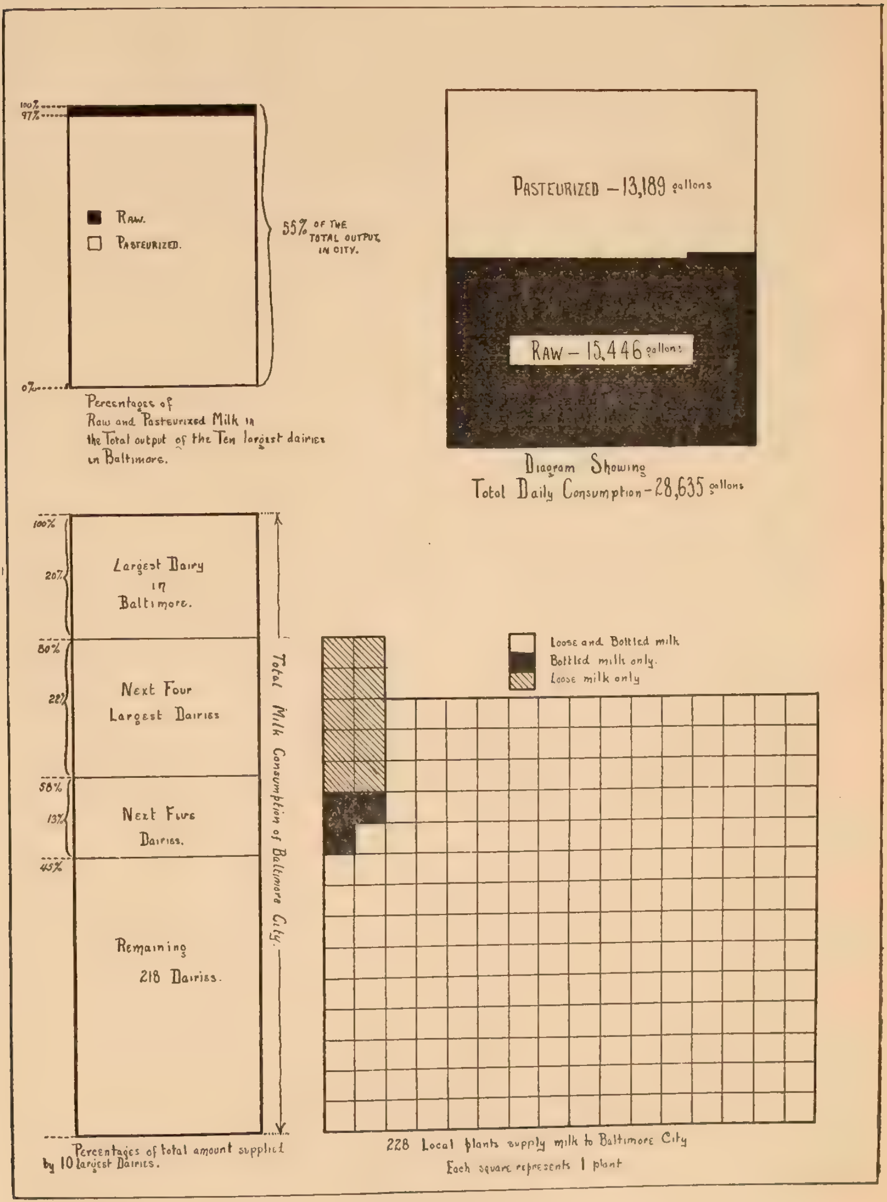
100%
97%
0%
■ Raw.
☐ Pasteurized.
55% of the total output in city.
Percentages of Raw and Pasteurized Milk in the Total output of the Ten largest dairies in Baltimore.
Pasteurized – 13,189 gallons
Raw – 15,446 gallons
Diagram Showing Total Daily Consumption – 28,635 gallons
100%
20%
80%
22%
58%
13%
45%
Largest Dairy in Baltimore.
Next Four Largest Dairies
Next Five Dairies.
Remaining 218 Dairies.
Total Milk Consumption of Baltimore City.
Percentages of total amount supplied by 10 largest Dairies.
☐ Loose and Bottled milk
■ Bottled milk only.
▨ Loose milk only
228 Local plants supply milk to Baltimore City
Each square represents 1 plant

CHART No. 1.

Table No. IV summarizes the work accomplished by our milk inspectors during the year. Only 6.1 per cent. of the total amount of milk received at the railroad depots was inspected. This inspection includes the lactometer, dirt and temperature tests, and inspection of the cleanliness of the container. Of the total amount of milk inspected, 7,312⅞ gallons were condemned and destroyed.

TABLE NO. IV—*Showing the Amount of Work Done by Milk Inspectors, by Months, During* 1913.

MONTHS.	Amount of Milk Received at Depots.	Amount of Milk Examined.	Amount of Milk Condemned.	Dairy and Milk Shop Inspections.	Wagon Inspections.	Railroad Depots Visited.
January	752,496½	60,220	273	830	363	131
February	655,452	52,521	182	1,114	224	115
March	747,454½	53,630	294½	1,309	199	120
April	740,123½	56,505	612	1,175	195	131
May	891,720	53,200	339	950	369	131
June	877,869½	49,445	742½	950	391	125
July	833,894½	42,620	1,155	753	341	122
August	869,011½	37,930	1,008⅜	884	182	122
September	778,856	38,400	886	771	174	110
October	758,908½	47,400	770	766	209	135
November	691,409	40,090	372½	694	132	117
December	748,667	41,143	678	705	191	132
Total	9,345,860½	573,104	7,312⅞	10,901	2,970	1,491

Whenever a case of contagious or infectious disease occurs on a premise where milk is sold, the permit for the sale of milk or cream from that premise is temporarily revoked until all danger of infection is over. The number of these quarantines is presented in tabular form in Table No. V.

TABLE No. V—*Showing Number of Places Quarantined on Account of Communicable Diseases, by Months, During the Year* 1913.

DISEASES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Typhoid fever	...	...	...	...	1	...	3	10	5	...	1	1	21
Scarlet fever	1	1	2	2	3	1	2	...	2	...	...	1	15
Diphtheria	...	3	1	...	1	1	1	1	2	2	1	4	17
Measles	...	11	12	24	11	...	1	...	...	...	...	...	59
Tuberculosis	...	1	2	1	...	...	1	...	...	...	1	...	6
Total for year	1	16	17	27	16	2	8	11	9	2	3	6	118

A careful record is also kept of the incidence of typhoid fever, scarlet fever and diphtheria on the routes of the various distributing dairies. Notices are sent daily to each dairy whenever one of the above-mentioned diseases occurs on its route. The number of such notices sent is shown in Table No. VI.

TABLE No. VI—*Showing Cases of Communicable Diseases Reported on Dairymen's Routes, by Months, During* 1913.

MONTHS.	Diphtheria.	Scarlet Fever.	Typhoid Fever.	Total.
January	25	48	14	87
February	41	52	16	109
March	57	52	23	132
April	38	62	9	109
May	21	44	17	82
June	23	52	16	91
July	23	25	61	109
August	14	28	186	228
September	60	36	146	242
October	109	54	82	245
November	134	45	32	211
December	126	61	35	222
Total	671	559	637	1,867

Tables Nos. VII-XXII show the daily temperatures and average monthly temperatures of samples of milk collected at the railroad depots, wagons, stores and lunchrooms during the summer.

TABLE NO. VII—*Daily Temperature Record of Station Samples, June*, 1913.

DATE.	Number of Samples.	Maximum Temperature.	Minimum Temperature.	Average Temperature.
20	38	70.0	60.0	64.0
21	54	72.0	60.0	64.0
22	....	....	....	....
23	28	66.0	56.0	60.5
24	41	72.0	55.0	63.2
25	36	68.0	60.0	63.5
26	48	70.0	58.0	64.4
27	45	70.0	58.0	65.2
28	50	74.0	60.0	66.7
29	....	....	....	....
30	43	70.0	60.0	63.6
Average temperature	....	....	....	62.0

TABLE NO. VIII—*Daily Temperature Record of Station Samples, July, 1913.*

DATE.	Number of Samples.	Maximum Temperature.	Minimum Temperature.	Average Temperature.
1	27	72.0	60.0	66.2
2	36	74.0	60.0	67.9
3	37	70.0	60.0	65.4
4				
5				
6				
7	41	64.0	54.0	59.4
8	63	70.0	52.0	61.5
9	40	70.0	56.0	62.2
10	60	70.0	60.0	66.7
11	33	66.0	56.0	61.9
12	59	72.0	54.0	65.5
13				
14	40	74.0	58.0	65.6
15	47	72.0	54.0	62.3
16	27	65.0	58.0	61.3
17	35	68.0	50.0	62.1
18	34	72.0	57.0	63.8
19	42	72.0	54.0	64.1
20				
21	32	70.0	56.0	63.1
22	22	72.0	54.0	61.4
23	26	70.0	56.0	63.6
24	27	72.0	60.0	64.0
25	26	70.0	56.0	65.0
26	41	70.0	52.0	60.8
27				
28	33	76.0	60.0	67.7
29	27	75.0	60.0	65.7
30	35	74.0	60.0	66.3
31	42	78.0	58.0	65.9
Average temperature				64.5

TABLE NO. IX—*Daily Temperature Record of Station Samples, August,* 1913.

DATE.	Number of Samples.	Maximum Temperature.	Minimum Temperature.	Average Temperature.
1	29	74.0	60.0	69.3
2	38	75.0	60.0	66.8
3	......	......	......	......
4	27	74.0	60.0	66.8
5	20	70.0	58.0	63.3
6	36	70.0	60.0	64.9
7	40	76.0	56.0	65.8
8	31	74.0	58.0	66.0
9	36	74.0	60.0	67.4
10	......	......	......	......
11	......	......	......	......
12	34	64.0	50.0	61.7
13	41	70.0	44.0	63.1
14	40	70.0	52.0	65.1
15	46	70.0	58.0	61.9
16	54	72.0	56.0	63.5
17	......	......	......	......
18	46	72.0	60.0	65.9
19	35	74.0	60.0	67.4
20	34	66.0	58.0	60.1
21	36	70.0	52.0	60.4
22	26	70.0	56.0	63.1
23	26	70.0	62.0	66.1
24	......	......	......	......
25	18	66.0	58.0	61.5
26	26	70.0	52.0	61.8
27	30	74.0	60.0	66.5
28	26	70.0	56.0	63.3
29	46	70.0	58.0	65.4
30	42	70.0	58.0	64.5
31	......	......	......	......
Average temperature	......	......	......	64.7

TABLE NO. X—*Daily Temperature Record of Station Samples, September, 1913.*

DATE.	Number of Samples.	Maximum Temperature.	Minimum Temperature.	Average Temperature.
1	....	....	....	....
2	24	72.0	60.0	64.9
3	34	70.0	58.0	61.5
4	34	74.0	62.0	67.6
5	35	74.0	60.0	66.0
6	48	72.0	62.0	66.2
7	....	....	....	....
8	....	....	....	....
9	35	70.0	58.0	62.4
Average temperature	....	....	....	59.8

TABLE NO. XI—*Showing Record of Temperature for Wagon Samples, June,* 1913.

DATE.	Number of Samples.	Maximum Temperature.	Minimum Temperature.	Average Temperature.
20	20	60.0	45.0	52.8
21	....	....	....	....
22	....	....	....	....
23	20	56.0	42.0	50.8
24	16	60.0	44.0	50.8
25	23	60.0	40.0	48.4
26	11	65.0	40.0	53.6
27	....	....	....	....
28	....	....	....	....
29	....	....	....	....
30	7	66.0	42.0	51.7
Average temperature	....	....	....	51.4

TABLE No. XII—*Showing Record of Temperature for Wagon Samples, July,* 1913.

DATE.	Number of Samples.	Maximum Temperature.	Minimum Temperature.	Average Temperature.
1	2	60.0	44.0	54.0
2	7	52.0	45.0	49.3
3	5	65.0	54.0	59.8
4	....	....	....	....
5	....	....	....	....
6	....	....	....	....
7	11	65.0	45.0	51.6
8	3	60.0	50.0	54.6
9	....	....	....	....
10	7	65.0	47.0	57.0
11	12	54.0	42.0	49.3
12	....	....	....	....
13	....	....	....	....
14	18	65.0	42.0	54.9
15	4	55.0	48.0	50.2
16	2	55.0	50.0	52.5
17	9	60.0	40.0	48.3
18	8	58.0	46.0	52.9
19	....	....	....	....
20	....	....	....	....
21	11	58.0	45.0	53.2
22	9	58.0	46.0	50.7
23	16	60.0	44.0	49.0
24	23	56.0	44.0	53.0
25	26	54.0	32.0	46.0
26	....	....	....	....
27	....	....	....	....
28	20	60.0	44.0	52.0
29	15	68.0	44.0	50.8
30	13	65.0	46.0	51.5
31	31	60.0	38.0	51.7
Average temperature	....	....	....	52.0

TABLE NO. XIII—*Showing Record of Temperature for Wagon Samples, August,* 1913.

DATE.	Number of Samples.	Maximum Temperature.	Minimum Temperature.	Average Temperature.
1	3	55.0	50.0	51.6
2	....	....	....	....
3	....	....	....	....
4	2	60.0	55.0	57.5
5	22	60.0	38.0	51.0
6	14	60.0	45.0	51.1
7	5	60.0	48.0	55.4
8	11	55.0	46.0	50.3
9	....	....	....	....
10	....	....	....	....
11	7	52.0	40.0	46.0
12	5	54.0	44.0	50.0
13	5	60.0	46.0	52.8
14	1	....	....	48.0
15	5	54.0	46.0	50.4
16	....	....	....	....
17	....	....	....	....
18	12	55.0	45.0	48.6
19	5	52.0	46.0	50.4
20	5	54.0	40.0	46.4
21	....	....	....	....
22	3	52.0	46.0	48.7
23	....	....	....	....
24	....	....	....	....
25	2	50.0	48.0	49.0
26	7	56.0	48.0	52.0
27	10	56.0	45.0	50.1
28	12	57.0	45.0	51.9
29	2	60.0	55.0	57.5
30	....	....	....	....
31	....	....	....	....
Average temperature	....	....	....	50.9

TABLE NO. XIV—*Showing Record of Temperature for Wagon Samples, September,* 1913.

DATE.	Number of Samples.	Maximum Temperature.	Minimum Temperature.	Average Temperature.
1	....	....	....	....
2	4	55.0	54.0	54.8
3	8	52.0	35.0	48.8
4	4	60.0	49.0	55.0
5	....	....	....	....
6	....	....	....	....
7	....	....	....	....
8	....	....	....	....
9	1	50.0	50.0	50.0
Average temperature	....	....	....	52.2

TABLE NO. XV—*Showing Record of Temperature for Store Samples, June,* 1913.

DATE.	Number of Samples.	Maximum Temperature.	Minimum Temperature.	Average Temperature.
20	9	56.0	44.0	50.4
21	....	....	....	....
22	....	....	....	....
23	12	56.0	45.0	50.6
24	6	64.0	40.0	51.3
25	13	58.0	40.0	47.7
26	19	70.0	44.0	50.8
27	13	64.0	46.0	53.5
28	....	....	....	....
29	....	....	....	....
30	11	60.0	46.0	51.2
Average temperature	....	....	....	50.8

TABLE No. XVI—*Showing Record of Temperature for Store Samples, July*, 1913.

Date.	Number of Samples.	Maximum Temperature.	Minimum Temperature.	Average Temperature.
1	2	50.0	42.0	46.0
2	7	60.0	44.0	52.0
3	7	66.0	46.0	51.4
4				
5				
6				
7	17	56.0	44.0	51.1
8	19	56.0	36.0	46.0
9	17	58.0	32.0	48.1
10	16	62.0	42.0	49.5
11	18	55.0	40.0	48.1
12				
13				
14	18	60.0	42.0	51.6
15	14	62.0	42.0	50.9
16	15	60.0	40.0	47.9
17	7	55.0	40.0	47.6
18	9	56.0	46.0	50.9
19				
20				
21	13	58.0	39.0	47.1
22				
23				
24				
25				
26				
27				
28				
29				
30	11	64.0	45.0	51.1
31	11	70.0	44.0	50.1
Average temperature				49.3

TABLE No. XVII—*Showing Record of Temperature for Store Samples, August,* 1913.

DATE.	Number of Samples.	Maximum Temperature.	Minimum Temperature.	Average Temperature.
1	5	52.0	45.0	49.0
2	....	....	....	....
3	....	....	....	....
4	4	60.0	50.0	55.5
5	2	60.0	54.0	57.0
6	12	54.0	38.0	49.3
7	16	60.0	42.0	50.1
8	26	60.0	36.0	51.0
9	....	....	....	....
10	....	....	....	....
11	5	55.0	48.0	51.6
12	5	58.0	44.0	49.6
13	4	50.0	44.0	48.0
14	4	51.0	48.0	49.2
15	26	62.0	36.0	47.2
16	....	....	....	....
17	....	....	....	....
18	4	80.0	48.0	56.5
19	14	57.0	44.0	51.1
20	18	61.0	32.0	49.6
21	13	55.0	38.0	47.9
22	4	54.0	50.0	52.0
23	....	....	....	....
24	....	....	....	....
25	6	60.0	46.0	50.0
26	11	55.0	44.0	49.9
27	6	54.0	43.0	48.8
28	13	58.0	48.0	52.7
29	13	60.0	39.0	51.0
30	....	....	....	....
31	....	....	....	....
Average temperature	....	....	....	50.8

TABLE NO. XVIII—*Showing Record of Temperature for Store Samples, September,* 1913.

DATE.	Number of Samples.	Maximum Temperature.	Minimum Temperature.	Average Temperature.
1	....	....	....	....
2	10	64.0	42.0	49.7
3	14	56.0	47.0	51.3
4	13	60.0	48.0	51.4
5	....	....	....	....
6	....	....	....	....
7	....	....	....	....
8	....	....	....	....
9	11	52.0	44.0	49.3
Average temperature	....	....	....	50.4

TABLE NO. XIX—*Showing Record of Temperature for Lunchroom Samples, June,* 1913.

DATE.	Number of Samples.	Maximum Temperature.	Minimum Temperature.	Average Temperature.
20	....	....	....	....
21	....	....	....	....
22	....	....	....	....
23	....	....	....	....
24	4	44.0	36.0	40.0
25	....	....	....	....
26	....	....	....	....
27	....	....	....	....
28	....	....	....	....
29	....	....	....	....
30	2	52.0	50.0	51.0
Average temperature	....	....	....	45.5

TABLE NO. XX—*Showing Record of Temperature for Lunchroom Samples, July,* 1913.

DATE.	Number of Samples.	Maximum Temperature.	Minimum Temperature.	Average Temperature.
1	5	54.0	40.0	47.0
2	4	56.0	48.0	52.8
3	3	56.0	40.0	46.6
4	....	....	....	....
5	....	....	....	....
6	....	....	....	....
7	3	62.0	38.0	47.0
8	3	48.0	40.0	44.6
9	7	48.0	42.0	45.4
10	....	....	....	....
11	3	42.0	40.0	41.3
12	....	....	....	....
13	....	....	....	....
14	8	50.0	32.0	42.0
15	9	60.0	38.0	45.3
16	4	50.0	44.0	46.0
17	4	48.0	38.0	44.5
18	2	54.0	52.0	53.0
19	....	....	....	....
20	....	....	....	....
21	....	....	....	....
22	....	....	....	....
23	....	....	....	....
24	....	....	....	....
25	....	....	....	....
26	....	....	....	....
27	....	....	....	....
28	....	....	....	....
29	....	....	....	....
30	....	....	....	....
31	....	....	....	....
Average temperature	....	....	....	46.2

TABLE NO. XXI—*Showing Record of Temperature for Lunchroom Samples, August,* 1913.

DATE.	Number of Samples.	Maximum Temperature.	Minimum Temperature.	Average Temperature.
1	6	52.0	38.0	48.3
2				
3				
4				
5				
6				
7				
8	4	50.0	38.0	46.5
9				
10				
11	9	52.0	36.0	44.6
12				
13	5	52.0	38.0	42.4
14				
15				
16				
17				
18				
19	3	50.0	38.0	45.3
20				
21	18	54.0	38.0	46.1
22				
23				
24				
25				
26				
27	10	52.0	48.0	49.1
28	9	58.0	46.0	51.5
29				
30				
31				
Average temperature				46.7

TABLE NO. XXII—*Showing Record of Temperature for Lunchroom Samples, September, 1913.*

DATE.	Number of Samples.	Maximum Temperature.	Minimum Temperature.	Average Temperature.
1				
2				
3				
4	3	52.0	46.0	50.0
5				
6				
7				
8				
9				
Average temperature				

PASTEURIZING DAIRIES.

Whereas there were only six pasteurizing dairies in 1912, there were 19 such plants in 1913. Realizing the importance and necessity for a careful supervision of all such establishments, a preliminary survey was made during the latter part of the year to obtain detailed information of the operation of these plants. This data is summarized as follows:

Records Obtained from Eighteen Dairies.

These 18 dairies have a total daily output of 12,300 gallons of milk and 380 gallons of cream, and serve a total of 43,450 customers. The largest delivers 4,000 gallons to 13,000 customers, and operates 50 wagons and employs 125 helpers. The smallest delivers 60 gallons to 200 customers. Three of them sell bottled milk only, and the other 15 sell both bottled and bulk milk. The total daily output of bottled milk is 10,044 gallons and of bulk milk is 2,256. These 18 dairies operate 172 wagons and have 365 employees. Sixteen of them are supplied by 746 dairy farms, and two of them produce their own milk.

A general survey of the 18 plants shows the following: There are nine of them using the "flash" type of pasteurizer and nine of them using the "holding" type. The time of pasteurization ranges all the way from two minutes to 30 minutes.

In 2 plants the time is 2 minutes.
In 1 plant the time is 4 minutes.
In 9 plants the time is 5 minutes.
In 1 plant the time is 10 minutes.
In 3 plants the time is 25 minutes.
In 2 plants the time is 30 minutes.

The temperature of pasteurization ranges from 140 degrees to 155 degrees Fahrenheit.

In 1 plant the temperature is 140 degrees.
In 10 plants the temperature is 145 degrees.
In 6 plants the temperature is 150 degrees.
In 1 plant the temperature is 155 degrees.

The holding apparatus in the eight which use that type differ as to construction. Three plants have each one continuous holding tank. Four plants have one tank with eight compartments. One plant has one tank with seven compartments. The temperature in the holder is 145 degrees in seven cases, and 148 degrees in the other case.

Three plants use a regenerator, and one plant uses a clarifier. In three plants the milk is run over an aerator prior to pasteurization. In six plants the pasteurized product is cooled without exposure to the air. The bottle filler in 14 plants was protected from exposure; 14 plants cap by hand and four by machine.

There are nine plants which have facilities for sterilizing bottles. The other nine clean them with hot water.

There are 16 plants which clean their pasteurizing apparatus by the use of live steam, and the other two use only hot water.

Storage facilities show temperatures ranging from 35 degrees to 45 degrees, the majority of cases showing 45 degrees. Two plants merely immerse their containing vessels in ice water. The time of storage before delivery ranges from nine to 24 hours.

Dairy farm inspection is carried on by five of these dairies. Four of them carry on laboratory work to show the efficiency of their plant and to analyze their raw product. In one case a premium is paid for a low bacterial count, and in one case a premium for high butterfat.

A careful study of this data shows the necessity for prompt and effective regulation of all such plants. The temperature and time of exposure in several of the plants using the flash type of pasteurizer are entirely inadequate to insure the destruction of pathogenic organisms, which consideration is the main purpose of pasteurization. Further, only nine of the 18 plants have facilities for the sterilization of bottles. Obviously, unless the pasteurized milk is placed in sterile bottles or other containers, much of the value of pasteurization will be lost.

The increase in the number of our pasteurizing plants renders imperative the formulation of suitable regulations or ordinances governing this process. At the present time, dairies contemplating the erection of pasteurizing apparatus, do so on their own responsibility, and without the necessity of securing any approval from the Health Department. Unless this condition is promptly remedied, we will have considerable difficulty in correcting these conditions in the future.

Table No. XXIII shows the tabulated results of bacteriological examinations of the milk supplied by the various pasteurizing dairies in 1913.

TABLE No. XXIII—*Summarized Bacteriological*

DAIRY

MONTHS.	Raw Milk at Plant.				Pasteurized	
	No. of Samples.	Maximum Count.	Minimum Count.	Average Count.	No. of Samples.	Maximum Count.
January	3	3,000,000	295,000	1,398,000	3	6,200
February	2	700,000	90,000	307,000	3	50,000
March	4	15,000,000	70,000	3,982,000	4	120,000
April	4	2,100,000	90,000	872,500	4	90,000
May	4	1,000,000	150,000	662,000	4	130,000
June	3	3,000,000	500,000	1,467,000	3	210,000
July	4	1,800,000	600,000	1,415,000	4	160,000
August	2	1,800,000	1,800,000	1,800,000	2	50,000
September	4	6,000,000	180,000	3,695,000	4	600,000
October	4	9,000,000	70,000	3,055,000	5	270,000
November	3	2,400,000	360,000	1,120,000	3	14,000
December	3	6,000,000	470,000	2,590,000	3	210,000
Average and total	41	....	....	1,645,292	42	....

Data—Pasteurizing Dairies, 1913.

"A."

Milk at Plant.				Original Package Pasteurized Milk.						
Minimum Count.	Average Count.	Per. Ct. Bacterial Reduction.	Colon Bacillus + 1.0 c. c.	No. of Samples.	*No. of Samples 50,000 or Under.	Per. Ct. of Samples 50,000 or Under.	Maximum Count.	Minimum Count.	Average Count.	Colon Bacillus + 1.0 c. c.
1,400	4,500	....	0	7	5	71.4	80,000	4,300	31,000	2
100	16,900	....	1	6	6	100.0	30,000	6,000	14,600	3
2,000	50,500	....	3	5	4	80.0	210,000	500	60,100	5
9,000	34,500	....	4	8	8	100.0	50,000	100	15,300	2
40,000	70,000	....	3	9	7	77.8	110,000	8,000	54,000	6
20,000	93,400	....	3	7	1	14.3	200,000	25,000	91,400	6
12,000	65,500	....	3	13	0	0.0	2,000,000	60,000	461,100	9
20,000	35,000	....	0	4	3	75.0	360,000	15,000	111,250	4
600	282,600	....	3	9	2	22.2	1,200,000	30,000	195,550	9
30,000	95,000	....	2	8	4	50.0	280,000	6,000	100,750	7
10,000	11,670	....	1	4	3	75.0	100,000	20,000	43,750	4
16,000	87,000	....	1	8	2	25.0	600,000	12,000	232,000	4
....	75,876	....	25	88	45	51.1	....	....	148,745	61

TABLE No. XXIII (Continued)—*Summarized*

DAIRY

MONTHS.	Raw Milk at Plant.				Pasteurized	
	No. of Samples.	Maximum Count.	Minimum Count.	Average Count.	No. of Samples.	Maximum Count.
January	4	900,000	70,000	376,000	4	35,000
February	3	700,000	1,000	267,000	4	7,000
March	4	4,000,000	40,000	1,222,000	3	20,000
April	4	800,000	1,000	330,200	4	6,000
May	4	2,400,000	340,000	985,000	4	9,000
June	3	2,400,000	300,000	1,050,000	3	7,000
July	4	1,500,000	300,000	1,000,000	4	14,000
August	2	1,400,000	500,000	950,000	2	70,000
September	4	6,000,000	750,000	2,062,500	4	15,000
October	3	8,000,000	2,500,000	4,500,000	3	40,000
November	4	7,000,000	150,000	335,000	4	30,000
December	3	1,800,000	120,000	873,400	3	30,000
Average and total	42	....	....	1,061,757	42	....

Bacteriological Data—Pasteurizing Dairies, 1913.

"B."

Milk at Plant.				Original Package Pasteurized Milk.						
Minimum Count.	Average Count.	Per. Ct. Bacterial Reduction.	Colon Bacillus + 1.0 c. c.	No. of Samples.	No. of Samples 50,000 or Under.	Per. Ct. of Samples 50,000 or Under.	Maximum Count.	Minimum Count.	Average Count.	Colon Bacillus + 1.0 c. c.
4,000	13.000	....	0	8	7	87.5	92,500	10,000	27,800	0
600	3.300	....	0	8	8	100.0	12,000	700	5,200	0
1.500	10.100	....	1	6	6	100.0	6.000	1.000	2,500	1
1,000	4.500	....	0	7	7	100.0	24,000	800	8,800	0
300	3.475	....	0	9	8	88.9	25,000	2,000	9,100	1
1,300	3,400	....	0	7	4	55.6	3.600,000	1,000	1,084,000	5
1.500	8.100	....	1	9	5	55.6	100.000	5.000	26.200	3
400	35,200	....	0	4	4	100.0	12.000	4,000	7,250	1
600	5,900	....	1	7	5	71.4	1,200,000	2,500	272,300	4
20.000	33.300	....	0	8	5	62.5	120.000	4.200	53,600	2
10,000	17.500	....	1	5	4	80.0	150,000	9,000	41,600	1
8,000	22.670	....	0	8	6	75.0	250.000	10,000	60,375	1
....	11.879	....	4	86	69	80.2	....	....	131.384	19

TABLE NO. XXIII (Continued)—*Summarized*

DAIRY

MONTHS.	Raw Milk at Plant.				Pasteurized	
	No. of Samples.	Maximum Count.	Minimum Count.	Average Count.	No. of Samples	Maximum Count.
January	4	340,000	23,000	130,000	4	66,000
February	3	1,600,000	130,000	810,000	2	5,000
March	3	400.000	30,000	173,000	3	3,000
April	4	450.000	90,000	247,500	4	2,000
May	3	8,000.000	240,000	3,113,000	3	3,600
June	4	1,200,000	300,000	755.000	4	8,000
July	4	6,000,000	400,000	2,725,000	4	32,000
August	2	2,100,000	1,900,000	2,000,000	2	60,000
September	2	4,200,000	700,000	2,450,000	1	....
October	4	4.000,000	1,500,000	2,650,000	4	500,000
November	2	1,800,000	280,000	1,040,000	2	3,000
December	5	1,500,000	160,000	808,000	5	150,000
Average and total	40	....	....	1.343.450	38	....

Bacteriological Data—Pasteurizing Dairies, 1913.

"C."

Milk at Plant.				Original Package Pasteurized Milk.						
Minimum Count.	Average Count.	Per. Ct. Bacterial Reduction.	Colon Bacillus + 1.0 c. c.	No. of Samples.	No. of Samples 50,000 or Under.	Per. Ct. of Samples 50,000 or Under.	Maximum Count.	Minimum Count.	Average Count.	Colon Bacillus + 1.0 c. c.
10,000	32,200	....	2	8	4	50.0	270,000	9,000	73.500	3
2,500	3.700	....	0	8	8	100.0	20.000	1,100	5.700	1
1,000	2,000	....	0	5	4	80.0	390.000	2,500	85.000	1
300	800	....	0	7	7	100.0	8,000	200	2.400	0
800	2,500	....	1	9	9	100.0	18,000	700	6,600	6
600	3,650	....	3	7	6	85.7	150,000	100	33.400	5
300	11,400	....	4	8	3	37.5	200,000	2,000	81,500	7
3.500	31,750	....	2	4	3	75.0	450,000	7,000	185,000	3
....	110,000	....	1	8	5	62.5	380,000	2.500	74.680	5
3.500	128.575	....	3	8	7	87.5	150,000	2,000	27,700	6
700	1,850	....	0	5	5	100.0	15,000	900	3.960	2
700	35,680	....	2	7	7	100.0	15,000	1,000	5.250	2
....	53.203	....	18	84	68	80.9	....	....	43.288	41

TABLE No. XXIII (Continued)—*Summarized*

DAIRY

MONTHS.	Raw Milk at Plant.				Pasteurized	
	No. of Samples.	Maximum Count.	Minimum Count.	Average Count.	No. of Samples.	Maximum Count.
January	3	1,035,000	50,000	561,000	3	195,000
February	3	450,000	80,000	310,000	2	500,000
March	4	600,000	120,000	300,000	4	70,000
April	4	3,000,000	600,000	1,200,000	4	1,200,000
May	3	2,400,000	500,000	1,667,000	3	450,000
June	3	3,600,000	100,000	1,567,000	3	900,000
July	4	2,800,000	13,000	1,378,000	4	480,000
August	3	3,000,000	700,000	1,734,000	3	480,000
September	2	3,600,000	120,000	1,860,000	2	48,000
October	4	2,500,000	30,000	1,230,000	4	2,100,000
November	1	90,000	90,000	90,000	1	150,000
December	5	500,000	100,000	352,000	5	500,000
Average and total	39	....	....	1,010,746	38	....

Bacteriological Data—Pasteurizing Dairies, 1913.

"D."

Milk at Plant.				Original Package Pasteurized Milk.							
Minimum Count.	Average Count.	Per. Ct. Bacterial Reduction.	Colon Bacillus + 1.0 c. c.	No. of Samples.	No. of Samples 50,000 or Under.	Per. Ct. of Samples 50,000 or Under.	Maximum Count.	Minimum Count.	Average Count.	Colon Bacillus + 1.0 c. c.
35,000	130,000	....	2	7	0	0.0	1,200,000	210,000	527,800	6
70,000	285,000	....	1	8	4	50.0	450,000	15,000	143,700	7
50,000	60,000	....	3	6	3	50.0	450,000	4,000	112,300	4
50,000	445,000	....	4	8	4	50.0	600,000	3,000	103,300	6
30,000	280,000	....	3	9	3	33.3	180,000	12,000	83,700	9
40,000	454,000	....	3	7	2	28.6	1,800,000	30,000	736,400	7
25,000	166,200	....	4	10	1	10.0	3,000,000	33,000	414,400	10
100,000	246,700	....	3	4	0	0.0	160,000	110,000	137,500	4
4,000	26,000	....	1	9	3	33.3	1,200,000	25,000	301,600	9
240,000	1,110,000	....	2	8	2	25.0	1,200,000	30,000	453,000	8
150,000	150,000	....	1	5	1	20.0	1,100,000	15,000	423,000	5
86,000	271,200	....	3	8	0	0.0	800,000	75,000	276,000	5
....	334,076	....	30	89	23	25.7	....	....	310,088	80

Table No. XXIII (Continued)—*Summarized*

Dairy

Months.	Raw Milk at Plant.				Pasteurized	
	No. of Samples	Maximum Count.	Minimum Count.	Average Count.	No. of Samples.	Maximum Count.
January	....	....	....	....	....	....
February	....	....	....	....	....	....
March	....	....	....	....	....	....
April	....	....	....	....	....	....
May	3	2,500,000	600,000	1,367,000	3	60,000
June	4	4,800,000	480,000	2,020,000	4	140,000
July	3	1,700,000	1,000,000	1,300,000	3	200,000
August	2	12,000,000	6,000,000	9,000,000	2	140,000
September	1	....	....	900,000	1	....
October	4	5,000,000	1,200,000	3,575,000	4	250,000
November	2	3,300,000	90,000	1,695,000	2	40,000
December	5	900,000	100,000	344,000	5	200,000
Average and total	24	....	....	2,232,950	24	....

Bacteriological Data—Pasteurizing Dairies, 1913.

"E."

Milk at Plant.				Original Package Pasteurized Milk.						
Minimum Count.	Average Count.	Per. Ct. Bacterial Reduction.	Colon Bacillus + 1.0 c. c.	No. of Samples.	No. of Samples 50,000 or Under.	Per. Ct. of Samples 50,000 or Under.	Maximum Count.	Minimum Count.	Average Count.	Colon Bacillus + 1.0 c. c.
....	....	....	....	7	5	71.4	440,000	6,000	85,600	6
....	....	....	....	6	5	83.3	120,000	3,500	28,200	6
....	....	....	....	4	2	50.0	500,000	600	186,400	3
....	....	....	....	9	7	77.8	90,000	1,500	27,600	3
20,000	38,300	....	3	9	0	0.0	3,300,000	70,000	913,300	7
1,400	44,350	....	3	7	0	0.0	900,000	180,000	434,200	7
16,000	80,300	....	2	9	0	0.0	2,100,000	210,000	1,023,300	8
50,000	95,000	....	1	7	0	0.0	4,000,000	100,000	1,190,000	7
....	6,000	....	0	8	1	12.5	2,100,000	50,000	684,800	7
300	122,575	....	4	8	2	25.0	300,000	7,000	229,000	7
12,000	26,000	....	1	5	1	20.0	900,000	25,000	251,000	5
15,000	76,800	....	1	8	0	0.0	1,300,000	100,000	417,500	7
....	70,229	....	15	87	23	26.4	....	....	488,121	73

TABLE NO. XXIII (Continued)—*Summarized*

DAIRY

MONTHS.	Raw Milk at Plant.				Pasteurized	
	No. of Samples.	Maximum Count.	Minimum Count.	Average Count.	No. of Samples.	Maximum Count.
January	....	....	....	....	....	....
February	....	....	....	....	....	....
March	....	....	....	....	....	....
April	....	....	....	....	....	....
May	2	12,000,000	3,000,000	7,500,000	2	240,000
June	2	5,000,000	1,500,000	3,250,000	2	75,000
July	1	....	....	1,200,000	1	....
August	1	300,000	300,000	300,000	1	200,000
September	....	....	....	....	....	....
October	....	....	....	....	....	....
November	....	....	....	....	....	....
December	5	7,000,000	10,000	1,716,000	5	300,000
Average and total	11	....	....	2,961,818	11	....

Bacteriological Data—Pasteurizing Dairies, 1913.

"F."

Milk at Plant.				Original Package Pasteurized Milk.						
Minimum Count.	Average Count.	Per. Ct. Bacterial Reduction.	Colon Bacillus + 1.0 c. c.	No. of Samples.	No. of Samples 50,000 or Under.	Per. Ct. of Samples 50,000 or Under.	Maximum Count.	Minimum Count.	Average Count.	Colon Bacillus + 1.0 c. c.
....	....	....	....	7	6	85.7	600,000	750	89,700	2
....	....	....	....	7	6	85.7	100,000	500	23,900	0
....	....	....	....	4	3	75.0	120,000	500	31,800	0
....	....	....	....	7	5	71.4	130,000	700	44,200	0
90,000	165,000	....	2	7	1	14.3	3,000,000	50,000	918,600	4
40,000	57,500	...	2	6	2	33.3	900,000	20,000	326,600	6
....	25,000	....	....	9	1	11.1	1,500,000	40,000	411,100	9
200,000	200,000	....	0	6	0	0.0	2,000,000	70,000	641,700	6
....	....	....	....	9	3	33.0	700,000	5,000	240,500	8
....	....	....	....	8	1	12.5	700,000	50,000	221,000	8
....	....	....	....	5	2	40.0	240,000	18,000	90,600	3
15,000	131,400	....	3	8	0	0.0	1,800,000	130,000	481,000	7
....	120,635	....	7	83	30	36.1	....	....	306,087	53

TABLE No. XXIII (Continued)—*Summarized*

DAIRY

MONTHS.	Raw Milk at Plant.				Pasteurized	
	No. of Samples.	Maximum Count.	Minimum Count.	Average Count.	No. of Samples.	Maximum Count.
January	....	....	....	....	....	....
February	1	....	....	1,200	....	....
March	....	....	....	....	....	....
April	....	....	....	....	....	....
May	2	6,000,000	200,000	3,100,000	2	55,000
June	3	2,400,000	450,000	1,650,000	3	90,000
July	3	10,000,000	330,000	5,443,000	3	4,500
August	3	10,000,000	4,000,000	6,267,000	3	120,000
September	1	....	....	4,200,000	1	....
October	3	5,100,000	600,000	2,800,000	3	30,000
November	2	3,000,000	170,000	1,585,000	2	40,000
December	1	9,000,000	9,000,000	9,000,000	1	20,000
Average and total	19	....	....	4,035,314	18	....

Bacteriological Data—Pasteurizing Dairies, 1913.

"G."

Milk at Plant.				Original Package Pasteurized Milk.							
Minimum Count.	Average Count.	Per. Ct. Bacterial Reduction.	Colon Bacillus + 1.0 c. c.	No. of Samples.	No. of Samples 50,000 or Under.	Per. Ct. of Samples 50,000 or Under.	Maximum Count.	Minimum Count.	Average Count.	Colon Bacillus + 1.0 c. c.
....	....	....	....	4	0	0.0	900,000	165,000	396,200	2
....	....	....	....	....	....	.....	....	....	....	....
....	....	....	....	....	....	.....	....	....	....	....
....	....	....	....	....	....	.....	....	....	....	....
25,000	40,000	....	2	3	1	33.3	360,000	40,000	167,000	1
11,000	44,000	....	2	4	1	25.0	1,800,000	10,000	500,000	2
1,600	2,600	....	2	4	0	0.0	700,000	130,000	428,000	3
6,000	48,700	....	2	1	0	0.0	....	....	9,000,000	1
....	6,000	....	1	1	0	0.0	....	....	900,000	1
8,000	16,000	....	0	3	1	33.3	5,000,000	45,000	1,881,000	2
16,000	28,000	....	1	1	0	0.0	800,000	800,000	800,000	1
20,000	20,000	....	1	....	....	.....	....	....	....	....
....	27,406	....	11	21	3	14.3	....	....	1,054,324	13

TABLE NO. XXIII (Continued)—*Summarized*

DAIRY

MONTHS.	Raw Milk at Plant.				Pasteurized	
	No. of Samples.	Maximum Count.	Minimum Count.	Average Count.	No. of Samples.	Maximum Count.
January	....	....	....	....	....	....
February	....	....	....	....	....	....
March	2	1,400,000	10,000	705,000	2	90,000
April	1	....	....	1,200,000	1	....
May	3	4,000,000	2,500,000	3,267,000	3	90,000
June	2	500,000	400,000	450,000	2	1,400,000
July	....	....	....	....	....	....
August	....	....	....	....	....	....
September	2	12,000,000	400,000	6,200,000	2	50,000
October	....	....	....	....	....	....
November	....	....	....	....	....	....
December	2	350,000	160,000	255,000	2	8,000
Average and total	12	....	....	2,222,583	12	....

Bacteriological Data—Pasteurizing Dairies, 1913.

"H."

Milk at Plant.				Original Package Pasteurized Milk.						
Minimum Count.	Average Count.	Per. Ct. Bacterial Reduction.	Colon Bacillus + 1.0 c. c.	No. of Samples.	No. of Samples 50,000 or Under.	Per. Ct. of Samples 50,000 or Under.	Maximum Count.	Minimum Count.	Average Count.	Colon Bacillus + 1.0 c. c.
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	2	2	100.0	15,000	2,000	8,500	0
30,000	60,000	....	1	4	3	75.0	150,000	3,500	45,500	0
....	6,000	....	0	4	4	100.0	9,000	2,000	4,000	0
20,000	57,000	....	3	4	3	75.0	270,000	13,000	83,200	2
130,000	765,000	....	0	4	2	50.0	1,500,000	12,000	461,750	3
....	....	....	....	3	1	33.3	210,000	8,000	94,000	2
....	....	....	....	1	0	0.0	240,000	240,000	240,000	1
1,400	25,400	....	1	2	2	100.0	18,000	8,000	13,000	2
....	....	....	....	4	1	25.0	1,000,000	25,000	446,250	3
....	....	....	....	....	....	......	....	....	....	....
4,000	6,000	....	1	4	2	50.0	70,000	50,000	57,500	0
....	157,483	....	6	32	20	62.5	....	....	154,931	13

TABLE NO. XXIII (Continued)—*Summarized*

DAIRY

MONTHS.	Raw Milk at Plant.				Pasteurized	
	No. of Samples.	Maximum Count.	Minimum Count.	Average Count.	No. of Samples.	Maximum Count.
January	....	....	....	....	....	....
February	....	....	....	....	....	....
March	....	....	....	....	....	....
April	....	....	....	....	....	....
May	2	600,000	350,000	475,000	2	50,000
June	2	400,000	60,000	230,000	3	120,000
July	3	6,000,000	500,000	2,400,000	4	110,000
August	2	600,000	400,000	500,000	2	50,000
September	4	3,000,000	70,000	1,317,000	3	1,200,000
October	2	2,700,000	400,000	1,550,000	2	25,000
November	1	3,600,000	....	....	2	400,000
December	3	1,000,000	80,000	593,400	3	20,000
Average and total	19	....	....	1,229,370	21	....

Bacteriological Data—Pasteurizing Dairies, 1913.

"I."

Milk at Plant.				Original Package Pasteurized Milk.						
Minimum Count.	Average Count.	Per. Ct. Bacterial Reduction.	Colon Bacillus + 1.0 c. c.	No. of Samples.	No. of Samples 50,000 or Under.	Per. Ct. of Samples 50,000 or Under.	Maximum Count.	Minimum Count.	Average Count.	Colon Bacillus + 1.0 c. c.
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
45,000	47,500	....	0	....	....	......	....	....	....	....
3,300	54,400	....	0	....	....	......	....	....	....	....
25,000	50,200	....	2	....	....	......	....	....	....	....
40,000	45,000	....	1	....	....	......	....	....	....	....
18,000	452,600	....	2	1	0	0.0	....	....	240,000	1
14,000	19,500	....	0	....	....	......	....	....	....	....
4,000	202,000	....	0	....	....	......	....	....	....	....
6,400	15,470	....	0	4	2	50.0	110,000	10,000	56,250	2
....	114,105	....	5	5	2	40.0	....	....	93,000	3

TABLE No. XXIII (Continued)—*Summarized*

DAIRY

MONTHS.	Raw Milk at Plant.				Pasteurized	
	No. of Samples.	Maximum Count.	Minimum Count.	Average Count.	No. of Samples.	Maximum Count.
January	....	....	....	....	....	....
February	....	....	....	....	....	....
March	....	....	....	....	....	....
April	....	....	....	....	....	....
May	3	200,000	70,000	150,000	3	50,000
June	4	900,000	50,000	430,000	4	18,000
July	4	100,000,000	200,000	25,300,000	4	270,000
August	3	3,500,000	270,000	1,416,700	3	220,000
September	2	3,600,000	60,000	1,830,000	2	48,000
October	4	450,000	120,000	442,500	4	30,000
November	2	40,000	30,000	35,000	2	4,000
December	5	200,000	25,000	78,200	4	5,000
Average and total	27	....	....	4,200,411	26	....

Bacteriological Data—Pasteurizing Dairies, 1913.

"J."

Milk at Plant.				Original Package Pasteurized Milk.						
Minimum Count.	Average Count.	Per. Ct. Bacterial Reduction.	Colon Bacillus + 1.0 c. c.	No. of Samples.	No. of Samples 50,000 or Under.	Per. Ct. of Samples 50,000 or Under.	Maximum Count.	Minimum Count.	Average Count.	Colon Bacillus + 1.0 c. c.
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
600	19,200	....	0	3	1	33.3	170,000	4,000	88,000	3
2,400	11,100	....	2	2	2	100.0	50,000	6,000	28,000	1
50,000	118,700	....	3	7	3	42.9	400,000	10,000	91,000	5
3,600	79,500	....	0	6	1	16.7	4,000,000	30,000	750,000	5
900	24,450	....	1	5	1	20.0	1,200,000	35,000	455,000	3
6,000	24,000	....	....	....	....	......	....	....	....	....
900	2,450	....	1	1	1	100.0	18,000	....	18,000	1
600	2,100	....	0	3	0	0.0	420,000	60,000	175,340	0
....	37,442	....	7	27	9	33.3	....	....	306,523	18

TABLE No. XXIII (Continued)—*Summarized*

DAIRY

MONTHS.	Raw Milk at Plant.				Pasteurized	
	No. of Samples.	Maximum Count.	Minimum Count.	Average Count.	No. of Samples.	Maximum Count.
January	....	....	....	....	....	....
February	....	....	....	....	....	....
March	....	....	....	....	....	....
April	....	....	....	....	....	....
May	2	3,900,000	330,000	2,115,000	2	9,600
June	3	6,000,000	220,000	3,740,000	3	1,200,000
July	....	....	....	....	....	....
August	....	....	....	....	....	....
September	2	7,200,000	700,000	3,950,000	2	360,000
October	....	....	....	....	....	....
November	....	....	....	....	....	....
December	3	1,000,000	100,000	486,670	3	40,000
Average and total	10	....	....	2,481,001	10	....

Bacteriological Data—Pasteurizing Dairies, 1913.

"K."

Milk at Plant.				Original Package Pasteurized Milk.						
Minimum Count.	Average Count.	Per. Ct. Bacterial Reduction.	Colon Bacillus + 1.0 c. c.	No. of Samples.	No. of Samples 50,000 or Under.	Per. Ct. of Samples 50,000 or Under.	Maximum Count.	Minimum Count.	Average Count.	Colon Bacillus + 1.0 c. c.
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
3,000	6,300	....	2	....	....	......	....	....	....	....
15,000	410,300	....	2	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
15,000	187,500	....	0	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
9,000	21,340	....	0	5	2	40.0	300,000	10,000	103,000	3
....	168,252	....	4	5	2	40.0	....	....	103,000	3

TABLE No. XXIII (Continued)—*Summarized*

DAIRY

MONTHS.	Raw Milk at Plant.				Pasteurized	
	No. of Samples.	Maximum Count.	Minimum Count.	Average Count.	No. of Samples.	Maximum Count.
January	....	....	....	....	....	....
February	....	....	....	....	....	....
March	....	....	....	....	....	....
April	....	....	....	....	....	....
May	2	200,000	30,000	115,000	2	4,500
June	4	1,800,000	600,000	1,125,000	4	90,000
July	4	3,000,000	45,000	1,386,000	4	300,000
August	2	5,000,000	45,000	2,522,000	2	120,000
September	2	4,800,000	500,000	2,650,000	2	420,000
October	4	7,000,000	1,500,000	4,150,000	4	70,000
November	2	3,600,000	160,000	1,880,000	2	25,000
December	3	9,000,000	1,500,000	4,167,000	3	30,000
Average and total	23	....	....	2,325,173	23	....

Bacteriological Data—Pasteurizing Dairies, 1913.

"L."

Milk at Plant.				Original Package Pasteurized Milk.						
Minimum Count.	Average Count.	Per. Ct. Bacterial Reduction.	Colon Bacillus + 1.0 c. c.	No. of Samples.	No. of Samples 50,000 or Under.	Per. Ct. of Samples 50,000 or Under.	Maximum Count.	Minimum Count.	Average Count.	Colon Bacillus + 1.0 c. c.
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
3,000	3.750	....	0	3	1	33.3	300,000	45,000	145.000	1
35,000	58.750	....	3	4	1	20.0	1,400,000	35,000	653.700	4
10,000	87,500	....	3	7	1	14.3	3,000,000	15,000	1,092.000	5
4.000	62,000	....	2	6	0	0.0	6,000,000	60,000	1.536.700	5
45,000	232,500	....	1	5	1	20.0	1,500,000	20,000	688.000	5
20,000	33.750	....	3	4	0	0.0	2,400,000	70,000	970,000	4
6,000	15.500	....	1	4	1	25.0	400,000	10,000	222,500	4
6,000	14.700	....	1	5	0	0.0	1,600,000	80,000	766,000	3
....	60,504	....	14	38	5	13.2	....	....	840,895	31

TABLE NO. XXIII (Continued)—*Summarized*

DAIRY

MONTHS.	Raw Milk at Plant.				Pasteurized	
	No. of Samples.	Maximum Count.	Minimum Count.	Average Count.	No. of Samples.	Maximum Count.
January	....	....	....	....	....	....
February	....	....	....	....	....	....
March	....	....	....	....	....	....
April	....	....	....	....	....	....
May	1	....	....	200,000	1	....
June	2	4,000,000	1,800,000	2,900,000	2	70.000
July	2	9,000,000	5,000,000	7,000,000	2	1,000,000
August	1	....	....	9,000,000	1	....
September	1	....	....	115.000	1	....
October	2	3,600,000	1,100,000	2,350,000	3	160,000
November	....	....	....	....	....	....
December	1	8,000,000	....	8,000,000	1	480,000
Average and total	10	....	....	4.181.500	11	....

Bacteriological Data—Pasteurizing Dairies, 1913.

"M."

Milk at Plant.				Original Package Pasteurized Milk.						
Minimum Count.	Average Count.	Per. Ct. Bacterial Reduction.	Colon Bacillus + 1.0 c. c.	No. of Samples.	No. of Samples 50,000 or Under.	Per. Ct. of Samples 50,000 or Under.	Maximum Count.	Minimum Count.	Average Count.	Colon Bacillus + 1.0 c. c.
....	....	....	....	....	....	.....	....	....	....	....
....	....	....	....	....	....	.....	....	....	....	....
....	....	....	....	....	....	.....	....	....	....	....
....	....	....	....	....	....	.....	....	....	....	....
....	40,000	....	0	....	....	.....	....	....	....	....
5,000	37,500	....	0	....	....	.....	....	....	....	....
25,000	512,500	....	0	....	....	.....	....	....	....	....
....	1,300	....	0	....	....	.....	....	....	....	....
....	6,000	....	0	....	....	.....	....	....	....	....
12,000	102,300	....	1	....	....	.....	....	....	....	....
....	....	....	....	....	....	.....	....	....	....	....
....	480,000	....	0	....	....	.....	....	....	....	....
....	174,018	....	1	....	....	.....	....	....	....	....

TABLE NO. XXIII (Continued)—*Summarized*

DAIRY

Months.	Raw Milk at Plant.				Pasteurized	
	No. of Samples.	Maximum Count.	Minimum Count.	Average Count.	No. of Samples.	Maximum Count.
January	....	....	....	....	....	....
February	....	....	....	....	....	....
March	....	....	....	....	....	....
April	....	....	....	....	....	....
May	....	....	....	....	....	....
June	....	....	....	....	....	....
July	....	....	....	....	....	....
August	....	....	....	....	....	....
September	....	....	....	....	....	....
October	....	....	....	....	....	....
November	....	....	....	....	....	....
December	....	....	....	....	....	....
Average and total	....	....	....	....	....	....

Bacteriological Data—Pasteurizing Dairies, 1913.

"N."

Milk at Plant.				Original Package Pasteurized Milk.						
Minimum Count.	Average Count.	Per. Ct. Bacterial Reduction.	Colon Bacillus + 1.0 c. c.	No. of Samples.	No. of Samples 50,000 or Under.	Per. Ct. of Samples 50,000 or Under.	Maximum Count.	Minimum Count.	Average Count.	Colon Bacillus + 1.0 c. c.
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	1	0	0.0	....	....	320,000	1
....	....	....	....	4	0	0.0	900,000	270,000	535,000	3
....	....	....	....	2	0	0.0	360,000	75,000	217,500	2
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	7	0	0.0	....	....	413,571	6

TABLE No. XXIII (Continued)—*Summarized*

DAIRY

MONTHS.	Raw Milk at Plant.				Pasteurized	
	No. of Samples.	Maximum Count.	Minimum Count.	Average Count.	No. of Samples.	Maximum Count.
January	...	...	...	...	...	...
February	...	...	...	...	...	...
March	...	...	...	...	...	...
April	...	...	...	...	...	...
May	...	...	...	...	...	...
June	...	...	...	...	...	...
July	...	...	...	...	...	...
August	...	...	...	...	...	...
September	...	...	...	...	...	...
October	...	...	...	...	...	...
November	1	600,000	...	600,000	1	45,000
December	5	330,000	60,000	165,200	5	50,000
Average and total	6	...	...	237.667	6	...

Bacteriological Data—Pasteurizing Dairies, 1913.

"O."

Milk at Plant.				Original Package Pasteurized Milk.						
Minimum Count.	Average Count.	Per. Ct. Bacterial Reduction.	Colon Bacillus + 1.0 c. c.	No. of Samples.	No. of Samples 50,000 or Under.	Per. Ct. of Samples 50,000 or Under.	Maximum Count.	Minimum Count.	Average Count.	Colon Bacillus + 1.0 c. c.
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	3	1	33.3	240,000	8,000	112,600	3
....	....	....	....	5	1	20.0	1,200,000	30,000	454,000	4
....	....	....	....	2	0	0.0	240,000	140,000	190,000	1
....	....	....	....	5	1	20.0	960,000	30,000	436,000	5
....	....	....	....	4	0	0.0	400,000	90,000	252,500	3
....	45,000	....	0	4	3	75.0	60,000	7,500	33,125	0
9,000	23,600	....	0	5	4	80.0	60,000	15,000	28,200	0
....	27,167	....	....	28	10	35.7	....	....	230,404	16

TABLE NO. XXIII (Continued)—*Summarized*

DAIRY

MONTHS.	Raw Milk at Plant.				Pasteurized	
	No. of Samples.	Maximum Count.	Minimum Count.	Average Count.	No. of Samples.	Maximum Count.
January	....	....	....	....	....	....
February	....	....	....	....	....	....
March	....	....	....	....	....	....
April	....	....	....	....	....	....
May	....	....	....	....	....	....
June	3	2,400,000	1,500,000	2,100,000	3	70,000
July	2	5,000,000	500,000	2,750,000	2	300,000
August	2	4,800,000	900,000	2,850,000	2	100,000
September	....	....	....	....	....	....
October	2	2,400,000	600,000	1,500,000	2	130,000
November	2	600,000	500,000	550,000	2	20,000
December	3	1,600,000	120,000	640,000	3	140,000
Average and total	14	....	....	1,680,000	14	....

Bacteriological Data—Pasteurizing Dairies, 1913.

"P."

Milk at Plant.				Original Package Pasteurized Milk.						
Minimum Count.	Average Count.	Per. Ct. Bacterial Reduction.	Colon Bacillus + 1.0 c. c.	No. of Samples.	No. of Samples 50,000 or Under.	Per. Ct. of Samples 50,000 or Under.	Maximum Count.	Minimum Count.	Average Count.	Colon Bacillus + 1.0 c. c.
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
....	....	....	....	....	....	......	....	....	....	....
30,000	46,700	....	1	2	0	0.0	180,000	110,000	145,000	2
60,000	180.000	....	0	4	1	25.0	900,000	25,000	383,750	3
35,000	72,500	...	0	2	0	0.0	600,000	330,000	465,000	2
....	....	....	....	3	0	0.0	130,000	110,000	120,000	3
112,000	121,000	....	0	4	0	0.0	1,000,000	160,000	582,500	4
14,000	17,000	....	0	3	2	66.7	60,000	16,000	42,000	3
30,000	90,000	....	0	4	2	50.0	1,300,000	23,000	393.250	2
....	85,079	....	1	22	5	22.7	....	....	310,909	19

It is evident from the foregoing data that much of the pasteurized milk sold in Baltimore is pasteurized in name only, and that the product in many instances is little, if any, better than the average raw milk sold in Baltimore.

Quality of Milk.

Tables Nos. XXIV-XXVII give the average percentage of butterfat, total number of samples above and below the legal standard at the different stages in the distribution of our milk supply. These averages are practically identical with those of previous years with the exception of the store samples which are somewhat lower. Here, again, it is evident that faulty and improper methods of handling, due in the main to ignorance, are largely responsible for this condition.

Table No. XXIV—*Record of Station Samples*, 1913.

Months.	Per Cent. Fat.	No. Above Legal Standard.	No. Below Legal Standard.	Total.
January	4.02	1,194	154	1,348
February	4.03	1,140	147	1,287
March	3.90	1,159	220	1,379
April	3.91	1,063	257	1,320
May	3.81	1,021	248	1,269
June	3.96	857	173	1,030
July	3.94	771	161	932
August	3.94	720	143	863
September	4.07	800	115	915
October	4.19	1,023	105	1,128
November	4.18	973	85	1,058
December	4.21	1,012	73	1,085
Average and total	4.01	11,733	1,881	13,614

TABLE No. XXV—*Record of Wagon Samples*, 1913.

MONTHS.	Per Cent. Fat.	No. Above Legal Standard.	No. Below Legal Standard.	Total.
January	3.76	246	77	323
February	3.90	147	56	203
March	3.65	96	58	154
April	3.65	110	62	172
May	3.76	110	46	156
June	3.69	177	85	262
July	3.70	175	80	255
August	3.64	90	49	139
September	3.86	92	18	110
October	3.23	111	37	148
November	3.77	82	22	104
December	3.86	102	34	136
Average and total	3.71	1,538	624	2,162

TABLE No. XXVI—*Record of Store Samples*, 1913.

MONTHS.	Per Cent. Fat.	No. Above Legal Standard.	No. Below Legal Standard.	Total.
January	3.61	101	73	174
February	3.64	135	76	211
March	3.52	174	153	327
April	3.58	187	160	347
May	3.53	149	122	271
June	3.53	90	108	198
July	3.48	105	94	199
August	3.50	112	99	211
September	3.64	154	84	238
October	3.52	165	129	294
November	3.18	150	97	247
December	3.66	176	77	253
Average and total	3.53	1,698	1,272	2,970

TABLE No. XXVII—*Record of Lunchroom Samples*, 1913.

MONTHS.	Per Cent. Fat.	No. Above Legal Standard.	No. Below Legal Standard.	Total.
January	3.69	47	21	68
February	3.83	111	39	150
March	3.73	48	12	60
April	3.47	48	28	76
May	3.72	58	22	80
June	3.70	56	31	87
July	3.60	30	25	55
August	3.63	35	29	64
September	3.84	29	11	40
October	3.93	30	10	40
November	4.09	46	22	68
December	3.89	94	20	114
Average and total	3.76	632	270	902

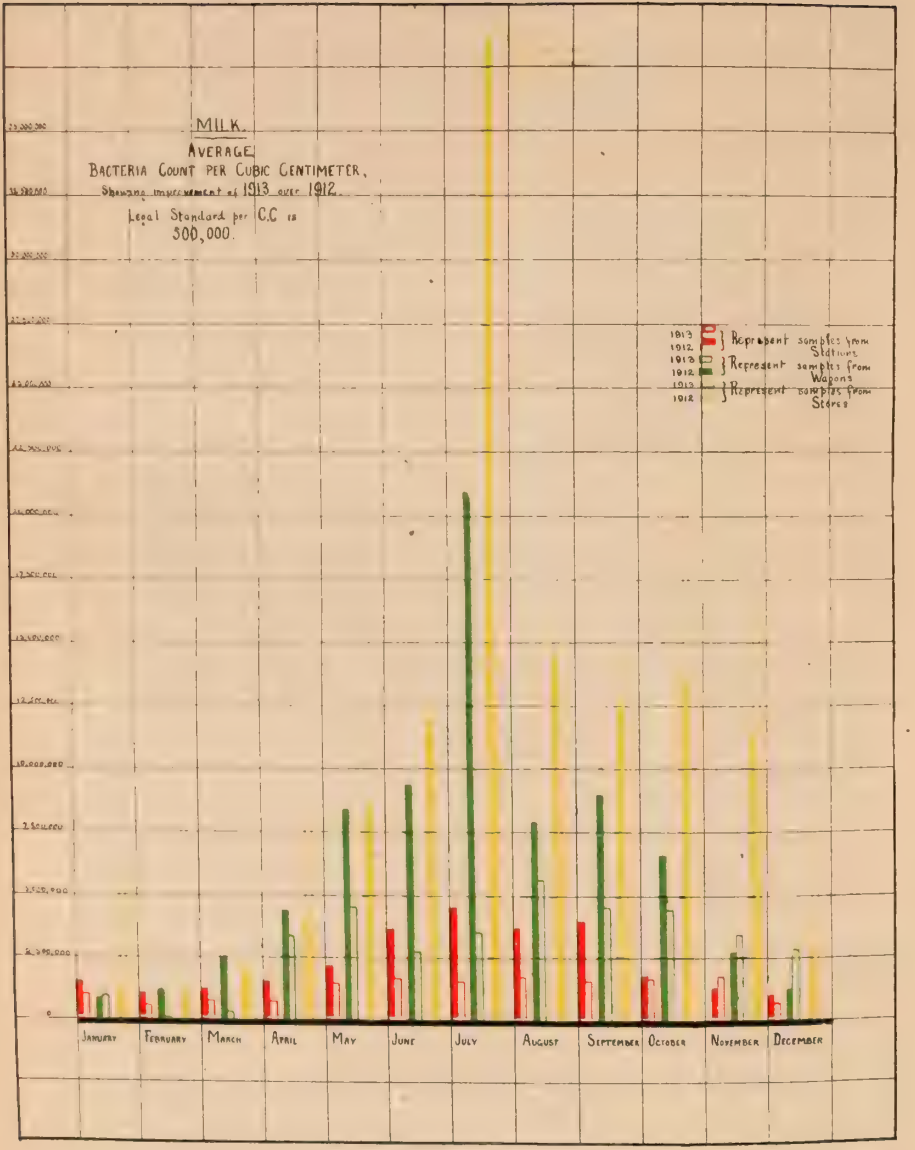
MILK.
AVERAGE
BACTERIA COUNT PER CUBIC CENTIMETER,
Showing improvement of 1913 over 1912.
Legal Standard per C.C is
500,000.
1913
1912
} Represent samples from Stations
1913
1912
} Represent samples from Wagons
1913
1912
} Represent samples from Stores
10,000,000
7,500,000
5,000,000
2,500,000
0
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER

CHART NO. 2.

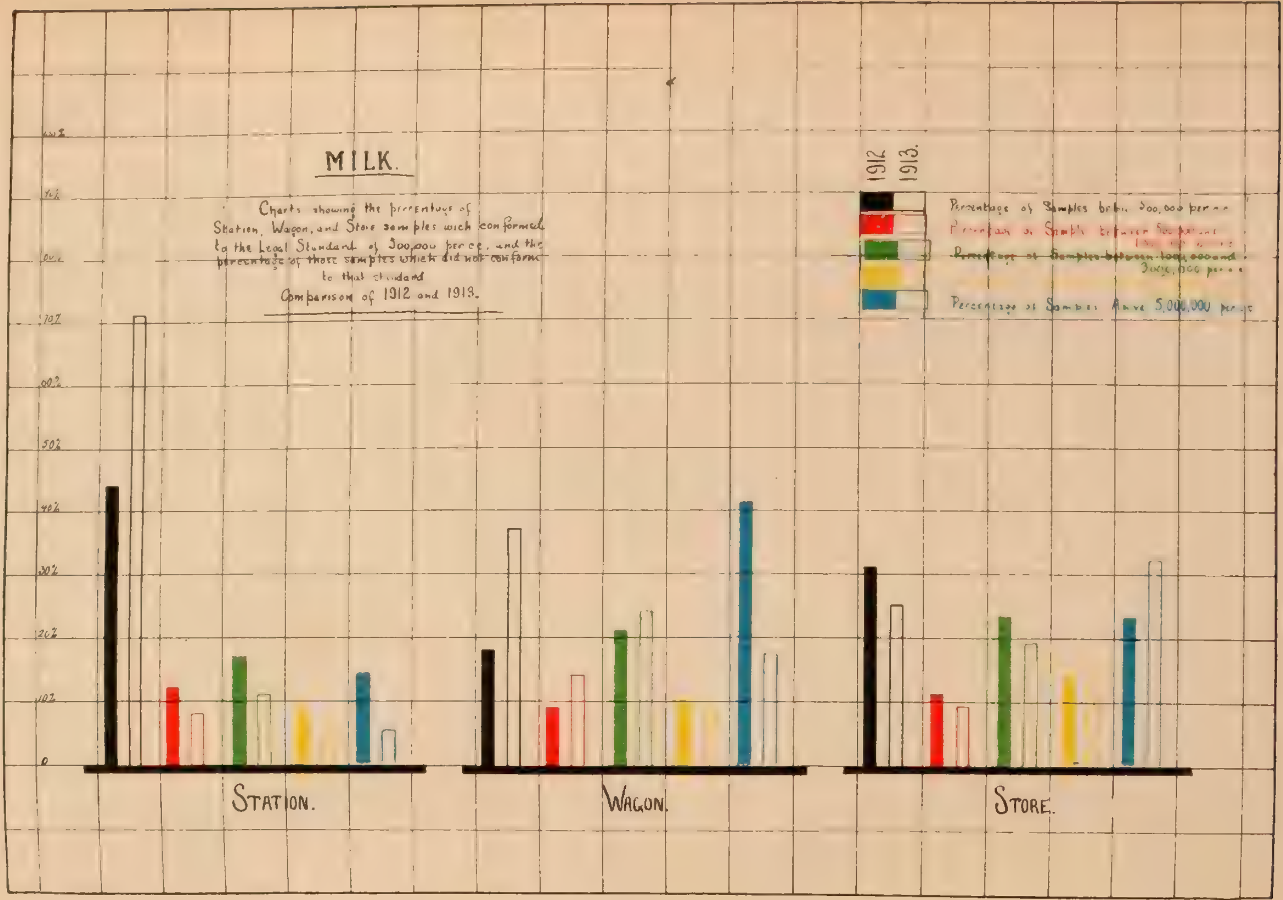MILK.
Charts showing the percentage of Station, Wagon, and Store samples which conformed to the Legal Standard of 300,000 per c.c., and the percentage of those samples which did not conform to that standard
Comparison of 1912 and 1913.
1912
1913.
Percentage of Samples below 300,000 per c.c.
Percentage of Samples between 300,000 and 1,000,000 per c.c.
Percentage of Samples between 1,000,000 and 3,000,000 per c.c.
Percentage of Samples Above 5,000,000 per c.c.
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0
STATION.
WAGON.
STORE.

CHART NO. 3.

The summarized bacteriological data is presented in Table No. XXVIII. These are of the greatest interest in showing what improvement, if any, has been made in our milk supply, and also in again focusing attention on the store problem. That a marked improvement has been made in the bacterial count of milk from the farms is highly gratifying. During the first year of our dairy farm inspection we have succeeded in lowering the average bacterial count of farm milk from 2,557,500 bacteria per c. c. in 1912, to 1,070,000 in 1913. In 1913, 71 per cent. of all station samples examined conformed to our raw milk bacteriological standard of 500,000 bacteria per cubic centimeter, whereas, in 1912 only 44 per cent. met this standard. I believe that this very marked improvement has been influenced primarily by the increased activity of our Department in this direction. The condition and improvement in the bacterial content of our milk supply is graphically illustrated in Charts Nos. 2 and 3.

The improvement noted in our milk supply from farms is also evidenced in the improved quality of milk as distributed by the wagons, although the improvement is not near so marked as in the case of farm milk. Both these charts again illustrate the difficulty of properly controlling the milk supply of stores under our present conditions. A further reference to these latter conditions will be made under the heading of "Local Food Ordinances and Conditions."

TABLE No. XXVIII—*Showing Summarized Bacterial Data on Various Types of Milk Samples Collected by Months During* 1913.—STATIONS.

MONTHS.	Number of Samples Examined.	Number of Samples 500,000 or Under.	Percent of Samples Under 500,000.	Number of Samples 100,000 or Under.	Number of Samples Above 500,000.	Number of Samples Between 500,000 and 1,000,000.	Number of Samples Between 1,000,000 and 3,000,000.	Number of Samples Between 3,000,000 and 5,000,000.	Number of Samples Between 5,000,000 and 10,000,000.	Number of Samples Above 10,000,000.	Maximum Bacterial Count.	Minimum Bacterial Count.	Average Bacterial Count.	Maximum Temperature (Milk).	Minimum Temperature (Milk).	Average Temperature (Milk).	Air Temperature.	Deaths 2 Years of Age and Under.	Deaths 2 Years of Age and Under Due to Intestinal Diseases.
January........	374	277	74.1	155	97	29	40	16	10	2	18,000,000	5,000	835,000	60	34	45.8	43.5	144	9
February........	374	348	93.0	303	26	13	9	2	0	2	20,000,000	1,000	231,000	60	30	42.5	36.2	162	6
March..........	404	348	86.1	258	56	18	19	3	12	4	12,000,000	1,000	567,000	71	30	51.5	48.8	177	16
April...........	376	295	78.4	207	81	30	33	11	6	1	13,000,000	1,000	636,000	65	40	52.9	55.6	171	11
May............	373	259	69.4	154	114	25	44	22	14	9	30,000,000	1,000	1,322,000	66	50	57.2	64.9	209	22
June............	324	197	60.8	119	127	32	54	20	13	8	30,000,000	3,000	1,558,000	70	49	62.0	73.7	226	66
July............	350	202	57.7	134	148	41	70	15	11	11	24,000,000	5,000	1,480,000	72	56	64.5	78.6	344	184
August.........	448	253	56.5	137	195	47	74	31	34	9	18,000,000	1,000	1,685,000	74	54	64.7	75.2	254	108
September......	307	189	61.2	127	118	28	48	19	15	8	24,000,000	2,000	1,510,000	78	48	59.8	68.4	212	75
October.........	532	306	57.5	150	226	58	87	39	31	11	24,000,000	1,000	1,573,000	70	46	57.6	59.6	168	32
November.......	368	295	80.2	213	73	25	27	12	6	3	40,000,000	1,000	1,691,000	62	44	51.3	49.0	159	16
December.......	333	271	81.4	199	62	22	25	9	4	2	15,000,000	2,000	564,000	62	32	50.4	41.4	175	13
Total.....	4563	3240	71.0	2156	1323	368	530	199	156	72	....	....	1,070,100	...	....	....	....	2401	558

TABLE No. XXVIII (Continued)—*Showing Summarized Bacterial Data on Various Types of Milk Samples Collected by Months During* 1913.—WAGONS.

MONTHS.	Number of Samples Examined.	Number of Samples 500,000 or Under.	Percent of Samples Under 500,000.	Number of Samples 100,000 or Under.	Number of Samples Above 500,000.	Number of Samples Between 500,000 and 1,000,000.	Number of Samples Between 1,000,000 and 3,000,000.	Number of Samples Between 3,000,000 and 5,000,000.	Number of Samples Between 5,000,000 and 10,000,000.	Number of Samples Above 10,000,000.	Maximum Bacterial Count.	Minimum Bacterial Count.	Average Bacterial Count.	Maximum Temperature (Milk).	Minimum Temperature (Milk).	Average Temperature (Milk).	Air Temperature.	Deaths 2 Years of Age and Under.	Deaths 2 Years of Age and Under Due to Intestinal Diseases.
January..........	39	15	38.5	6	24	11	10	3	0	0	5,000,000	40,000	1,100,000	50	36	43.3	43.5	144	9
February.........	30	28	93.3	15	2	0	2	0	0	0	1,800,000	10,000	238,000	45	30	38.3	36.2	162	6
March...........	35	27	77.1	9	8	5	3	0	0	0	2,400,000	1,000	431,000	52	40	47.3	48.8	177	16
April...........	54	22	40.7	9	32	11	7	8	1	5	45,000,000	10,000	3,540,000	65	42	48.8	55.6	171	11
May.............	156	38	24.3	6	118	16	46	16	23	17	50,000,000	10,000	4,611,000	57	42	48.7	64.9	209	22
June............	106	42	39.6	11	64	14	24	11	12	3	30,000,000	30,000	2,766,000	60	42	55.8	73.7	226	66
July............	103	32	31.1	9	71	10	34	9	10	8	50,000,000	30,000	3,676,000	56	44	49.8	78.6	344	184
August..........	35	3	8.6	1	32	5	11	5	6	5	40,000,000	80,000	5,668,000	52	45	47.1	75.2	254	108
September.......	26	10	38.5	3	16	3	4	0	3	6	18,000,000	10,000	4,607,000	56	40	48.8	68.4	212	75
October.........	33	9	27.3	1	24	2	11	2	3	6	21,000,000	90,000	4,516,000	62	44	49.1	59.6	168	32
November........	9	2	22.2	0	7	2	3	0	1	1	18,000,000	200,000	3,550,000	50	45	47.7	49.0	159	16
December........	54	21	38.9	3	33	15	9	2	4	3	45,000,000	20,000	2,839,000	50	32	42.2	41.4	175	13
Total.....	680	249	36.6	73	431	94	164	56	63	54	....	....	3,385,100	...	....	....	....	2401	558

TABLE No XXVIII (Continued)—*Showing Summarized Bacterial Data on Various Types of Milk Samples Collected by Months During 1913.*—STORES

MONTHS.	Number of Samples Examined.	Number of Samples 500,000 or Under.	Percent of Samples Under 500,000.	Number of Samples 100,000 or Under.	Number of Samples Above 500,000	Number of Samples Between 500,000 and 1,000,000.	Number of Samples Between 1,000,000 and 3,000,000.	Number of Samples Between 3,000,000 and 5,000,000.	Number of Samples Between 5,000,000 and 10,000,000.	Number of Samples Above 10,000,000.	Maximum Bacterial Count.	Minimum Bacterial Count.	Average Bacterial Count.	Maximum Temperature (Milk).	Minimum Temperature (Milk).	Average Temperature (Milk).	Air Temperature.	Deaths 2 Years of Age and Under.	Deaths 2 Years of Age and Under Due to Intestinal Diseases.
January.........	42	6	14.3	2	36	4	10	7	9	6	33,000,000	80,000	5,927,000	50	36	47.1	43.5	144	9
February........	60	37	61.6	11	23	11	7	3	2	0	6,000,000	20,000	952,000	55	40	43.9	36.2	162	6
March..........	39	27	69.2	14	12	4	3	1	2	2	18,000,000	1,000	1,730,000	54	40	47.5	48.8	177	16
April...........	44	8	18.1	2	36	4	8	10	4	10	80,000,000	50,000	8,446,000	55	45	49.2	55.6	171	11
May............	59	10	16.9	2	49	7	8	15	6	13	40,000,000	40,000	6,695,000	68	45	49.6	64.9	209	22
June............	42	12	28.6	0	30	6	12	6	4	2	30,000,000	150,000	3,437,000	50	45	48.0	73.7	226	66
July............	67	11	16.4	3	56	2	21	6	7	20	50,000,000	10,000	10,676,000	52	45	49.2	78.6	344	184
August.........	49	7	12.2	2	42	3	8	9	3	19	25,000,000	40,000	7,892,000	52	48	50.0	75.2	254	108
September......	11	1	9.1	1	10	1	0	1	4	4	70,000,000	10,000	14,355,000	54	45	50.0	68.4	212	75
October.........	33	2	6.1	0	31	0	5	4	5	17	90,000,000	200,000	20,692,000	52	48	50.0	59.6	168	32
November.......	29	1	3.5	1	28	1	8	4	3	12	60,000,000	100,000	16,934,000	52	45	50.8	49.0	159	16
December.......	41	8	19.5	1	33	4	10	5	3	11	50,000,000	80,000	7,240,000	50	45	48.9	41.0	175	13
Total.....	516	130	25.2	39	386	47	100	71	52	116	....	....	7,780,800	...	....	....	....	2401	558

TABLE No. XXVIII (Continued)—*Showing Summarized Bacterial Data on Various Types of Milk Samples Collected by Months During* 1913.—LUNCHROOMS.

MONTHS.	Number of Samples Examined.	Number of Samples 500,000 or Under.	Percent of Samples Under 500,000.	Number of Samples 100,000 or Under.	Number of Samples Above 500,000.	Number of Samples Between 500,000 and 1,000,000.	Number of Samples Between 1,000,000 and 3,000,000.	Number of Samples Between 3,000,000 and 5,000,000.	Number of Samples Between 5,000,000 and 10,000,000.	Number of Samples Above 10,000,000.	Maximum Bacterial Count.	Minimum Bacterial Count.	Average, Bacterial Count.	Maximum Temperature (Milk).	Minimum Temperature (Milk).	Average Temperature (Milk).	Air Temperature.	Deaths 2 Years of Age and Under.	Deaths 2 Years of Age and Under. Due to Intestinal Diseases.
January.........	13	3	23.1	1	10	1	2	4	3	0	8,000,000	70,000	3,507,000	50	45	47.1	43.5	144	9
February........	31	24	77.4	4	7	3	4	0	0	0	1,500,000	5,000	430,000	50	42	47.5	36.2	162	6
March..........	15	9	60.0	2	6	0	1	4	1	0	7,000.000	80,000	1,820,000	50	38	41.1	48.8	177	16
April...........	65	23	35.4	8	42	10	17	6	5	4	20,000,000	10,000	2,683,000	52	40	48.2	55.6	171	11
May............	39	7	17.9	2	32	3	10	5	4	10	40,000,000	80,000	7,061,000	50	38	46.6	64.9	209	22
June............	30	4	13.3	0	26	5	4	4	6	7	35,000,000	120,000	8,279,000	50	42	46.8	73.7	226	66
July............	10	0	00.0	0	10	1	2	0	2	5	70,000.000	800,000	18,400,000	50	45	48.8	78.6	344	184
August..........	29	3	10.3	0	26	0	11	5	5	5	40,000,000	200,000	6,865.000	52	45	49.1	75.2	254	108
September......	29	2	6.9	1	27	3	11	3	3	7	24,000 000	50.000	6,136,000	52	45	49.1	68.4	212	75
October.........	17	3	18.0	1	14	1	2	1	4	6	30.000,000	80,000	9,737.000	52	45	49.7	59.6	168	32
November.......	20	4	20.0	1	16	2	5	0	4	5	90,000,000	10,000	15,206,000	50	45	48.5	49.0	159	16
December.......	19	9	47.4	1	10	3	0	2	3	2	18,000,000	40 000	3,505,000	58	35	44.2	41.0	175	13
Total.....	317	91	28.7	21	226	32	69	34	40	51	....	....	5,932,600	...	....	....	....	2401	558

TABLE No. XXIX—*Showing Number of Low Butter Fat Notices Sent to Local Handlers, and the Number from Whom Replies Were Received by Months During the Year* 1913.

MONTHS.	Wagons.		Stores.		Lunch Rooms.		Total.	
	Sent.	Replied.	Sent.	Replied.	Sent.	Replied.	Sent.	Replied.
January	24	2	40	5	9	0	73	7
February	13	3	48	7	8	3	69	13
March	14	3	84	13	5	1	103	17
April	19	1	84	17	13	5	116	23
May	16	4	49	5	8	1	73	10
June	12	2	35	4	7	2	54	8
July	9	0	15	0	7	0	31	0
August	11	0	34	0	5	0	50	0
September	4	2	25	3	2	0	31	5
October	7	0	48	8	5	1	60	9
November	6	0	32	6	2	0	40	6
December	6	0	51	9	8	1	65	10
Total	141	17	545	77	79	14	765	108

BAKERY INSPECTION.

Table No. XXX shows the number of bakery inspections and the number ordered cleaned by months throughout the year.

The general conditions with regard to construction and general condition noted in our 1912 report are equally true of our bakeries in 1913. Through the efficient and active work of our Bakery Inspector, conditions have improved as much as possible under the existing surroundings. Emphasis must again be laid on the necessity for a thorough revision and modernization of our bakery ordinance. Such an ordinance should require that no new bakery be established, nor that any old bakery be remodelled, without the written approval of the Commissioner of Health. No bakeries should be permitted below the level of the street.

TABLE NO. XXX—*Showing Bakery Inspection by Months During* 1913.

MONTHS.	Bakeries Examined.	Bakeries Ordered Cleaned.
January	306	5
February	279	10
March	258	8
April	330	10
May	287	6
June	301	7
July	316	6
August	165	3
September	281	11
October	317	6
November	284	6
December	276	4
Total	3,400	82

ABATTOIR AND SLAUGHTER-HOUSE INSPECTION.

Table No. XXXI shows the amount of live stock examined by months during the year; the number of carcasses condemned will be found in Table No. XXXIV.

We are very greatly handicapped in this important work by the lack of suitable ordinances and insufficient inspection service. There are 79 such establishments not operating under the United States Government inspection. All these plants are visited by one inspector. Under government inspection there is at least one inspector at each plant. Obviously, it is impossible for us to control and supervise them properly with only one inspector. One solution of this problem would be the establishment of a municipal abattoir owned and operated by the city. This institution was originated in Europe and has proven very successful. The same system has been advocated by the foremost authorities in this country, and steps have already been taken in some parts of the country toward their establishment. By this means, all slaughtering of animals intended for human consumption would be under the direct supervision of the city and a suitable inspection stamp could be placed on all carcasses.

TABLE NO. XXXI—*Showing the Amount of Live Stock Examined by Months During* 1913.

MONTHS.	Cattle.	Sheep.	Hogs.	Calves.	Total.
January	4,883	18,809	17,421	6,948	48,061
February	5,547	16,125	15,671	5,598	43,941
March	3,772	11,723	10,199	4,237	19,931
April	6,013	18,080	15,686	6,826	46,605
May	5,232	18,943	15,576	6,691	46,442
June	6,799	40,266	16,269	6,714	70,048
July	5,730	20,857	9,463	5,497	41,547
August	5,861	22,206	9,934	5,412	43,413
September	7,882	24,689	13,942	6,508	53,021
October	8,026	30,255	23,937	6,441	68,659
November	6,021	26,783	20,065	5,065	57,934
December	6,071	25,442	23,111	4,654	59,278
Total	71,837	274,178	191,274	70,591	598,830

GENERAL FOOD INSPECTION.

Table No. XXXII shows the number and character of the inspections made by the food inspectors by months during the year 1913. The classification of the various foodstuffs condemned by these inspectors will be found in Table No. XXXIV. The large increase in the number of store and market inspections is due to the appointment of an additional food inspector on January 1, 1913. Whereas, the total amount of foodstuffs condemned in 1913 is much less than in 1912, I believe that our work has been more effective in that a considerable amount of foodstuffs has been condemned in the smaller stores.

Great difficulty has been experienced in securing sanitary conditions in the small stores handling a general food supply. We have been compelled to resort to time consuming measures in order to correct existing conditions. Our work in this direction would be greatly facilitated by a suitable ordinance regulating the sanitary condition of such places.

TABLE NO. XXXII—*Showing Amount of Work Done by the Food Inspectors by Months During the Year* 1913.

MONTHS.	Stores Inspected.	Markets Visited.	Wharves Visited.	Abattoirs Visited.	Slaughter Houses Visited.
January	1,287	192	493	55	315
February	1 928	183	484	48	287
March	2,067	201	525	26	149
April	1,701	204	525	45	281
May	1,946	541	220	48	300
June	1,702	526	211	46	266
July	1,177	463	185	52	311
August	1,352	508	176	53	306
September	1,466	483	181	52	289
October	1,821	570	219	58	338
November	1,424	485	185	51	305
December	1,566	220	546	57	304
Total	19.437	4.576	3 950	591	3.451

WATER.

The water examinations throughout the year were of a somewhat different nature than those of the preceding. The usual examinations of the Loch Raven and Lake Roland supplies were conducted during the first part of the year, but thereafter discontinued to allow for the examinations of all the leading table waters. The majority of these table waters were found to be of good quality.

A new phase of the water work was introduced by the surveying and analyzing of a number of water supplies upon the local dairy farms. Most of these examinations were conducted in conjunction with a bacteriological examination.

It is the intention of this Division to further elaborate a scheme, in this phase of the work, by which the water supplies of dairy farms shall be examined, with suggestions for a possible improvement of such supplies.

As was the custom in preceding years, a number of springs and wells in the city's parks were examined and recommendations for the condemnation of several followed; likewise, the regular examination of pumps lying within the city limits was continued with recommendations for the condemnation of all.

The water used in the manufacture of ice by several of the leading ice manufacturers was also examined upon the request of the several railroads using the ice of these concerns.

The total number of water samples examined during the year was 163.

COMPLAINTS.

During the year, 110 complaints were received and investigated against the character of foods offered for sale and the sanitary condition of premises where foods are exposed for sale and violations of regulations governing the handling of milk.

Eighty of these complaints were against sanitary condition of stores, lunchrooms, market stalls, etc., and the condition of the foodstuffs. Of these, 29 were found to be in satisfactory condition; 47 showed the presence of decomposed or bad foodstuffs; four showed the premises to be in a dirty condition.

Four complaints were received from citizens of unsound meat having been sold to them. Upon investigation the meat proved good in two cases and bad in the other two. Subsequent investigation of the places where the meat was purchased showed bad foodstuffs in two places.

Fourteen complaints were received of milk being sold without a permit. Investigation revealed the fact that five of these complaints were groundless and nine were correct.

Ten investigations were made of milk shops reported to be in bad condition. Of this number four were found to be in good condition and six in bad condition.

Two investigations were made of the use of pasteurized bottle caps on unpasteurized milk and the conditions were corrected.

LABORATORY WORK.

Table No. XXXIII shows the number of examinations made in the chemical laboratory during the year. As customary, milk work has largely predominated. The miscellaneous examinations include a variety of foodstuffs and analyses of samples submitted by the Police Department. The scope of our routine laboratory work must be enlarged so as to cover a broader field. Such work is necessary also in order to secure data as a foundation for new standards for local food ordinances. In order, however, to accomplish this additional work, it will be necessary to curtail our milk work considerably.

TABLE No. XXXIII—*Showing the Number of Milk, Water and Miscellaneous Chemical Analyses Made,* 1913.

MONTHS.	Milk Analyses.	Water Analyses.	Miscellaneous Analyses.
January	2,075	18	48
February	1,976	2	63
March	2,103	7	5
April	2,153	15	73
May	1,930	28	56
June	1,842	27	45
July	1,682	10	42
August	1,717	16	186
September	1,519	11	44
October	1,978	21	325
November	1,702	4	341
December	1,898	4	95
Total	22,757	163	1,323

PROSECUTIONS.

After a fair warning had been given and a reasonable time allowed for corrections to be made, prosecutions were instituted against 44 persons for violations of various food ordinances. The cases and results of the trials were as follows:

For selling milk without a permit, guilty	17
For selling milk without a permit, stet	2
For selling milk without a permit, dismissed	5
For selling milk containing less than 3.5 per cent. butterfat, guilty	5
For selling milk containing less than 3.5 per cent. butterfat, stet	1
For selling milk containing less than 3.5 per cent. butterfat, dismissed	1
For filling milk bottles on public highway, guilty	1
For selling unsound meats, vegetables and canned goods, guilty	7
For selling unsound meats, vegetables and canned goods, dismissed	1
For returning unwashed cans to shippers, guilty	2
For returning unwashed cans to shippers, dismissed	1
For failure to report case of infectious disease, guilty	1
Total number of prosecutions	44

In addition to the foregoing, 37 sealed samples of milk were obtained for prosecution, but all either exceeded the legal standard or were so close to the standard as not to warrant prosecution. These samples were classed as follows: wagons, 29; lunchrooms, 5, and stores 3.

Local Food Ordinances and Conditions.

Attention must again be focused on the inadequacy of our local food ordinances. No legislation has been added to our statutes since the passage of the milk ordinances in 1908. If the work of our inspection division is to be made effective we must have adequate and enforceable laws and a rapid and comprehensive system for the abatement of bad conditions. Our existing food laws, with the exception of milk, are lacking in definiteness and apply more to the character of the foods sold than to the sanitary condition surrounding the preparation or keeping of foodstuffs.

Experience has clearly shown that certain amendments or additions are imperative in our milk ordinances. The section dealing with milk permits should be so amended as to provide for the issuance of permits annually, at a nominal charge. By such a system we could keep a better record of the licensed establishments and the number of such establishments would undoubtedly be materially decreased.

In many of the stores in Baltimore conditions are such as to render it impossible to sell milk under sanitary conditions. The only remedy in such a case is either to prohibit entirely the sale of bulk milk or to compel the sale of bottled milk only. The prevention of the sale of milk on such premises would undoubtedly work a great hardship in many localities in the city.

Considering all the factors involved, I believe that the more satisfactory plan will be to require that all milk sold in Baltimore city in quantity of less than one gallon be sold in the original, unbroken package.

The tremendous increase in the number of pasteurizing dairies, already referred to, directs our attention to the urgent necessity of having proper ordinances or regulations defining this process. Inasmuch as such control will necessitate many changes and improvements in our city milk plants, ample time will have to be allowed for the required changes to be made. Under these conditions I respectfully recommend that suitable pasteurizing regulations be established to take effect within 12 months of the passage of this regulation and that on and after July 1, 1915, all milk sold or offered for sale in Baltimore shall be pasteurized in accordance with such regulations with the exception of certified or similiar high grade raw milk.

Our only existing general food law is characterized by a vagueness which has rendered it practically useless in the prosecutions of certain cases. The phraseology of this ordinance requires revision and should be so amended as to include the food standards now used by our State and National Government. By this means we would have uniformity in standards and prevent the sale in Baltimore city of foodstuffs manufactured here which cannot enter into interstate shipment.

We have an urgent need for the passage of an ordinance covering the sanitary condition of establishments manufacturing or offering foodstuffs for sale.

In conclusion I wish to commend Chief Inspector W. P. Palmer; our clerk, Mr. M. J. Gahan; our stenographer, Miss A. R. Fisher, and our assistant chemists, Messrs. Howes, Siegmund and Craig, for the faithful performance of their duties and the interest manifested in our work.

Respectfully submitted,

FRED C. BLANCK, PH.D.,
Chemist and Chief, Division of Food and Dairy Inspection.

TABLE No. XXXIV—*Showing Amount and Kind of Foodstuffs (Except Milk, Which Will Be Found in Table No. IV) Condemned by Months During* 1913.

MONTHS.	Vegetables.	Fruits.	Beef.	Veal.	Oysters.	Crabs.	Poultry.	Pork.	Rabbits.	Mutton.	Fish.	Game.	Eggs.	Crabmeat.	Liver Pudding	Cheese.	Stearin.
January	40,526	5,500	...	455½	600	...	247	525	...	...	120	...	128	705	...	...	...
February	27,680	31,575	...	251	10	...	...	175	...	...	200	1,800	...	110	7	2½	...
March	47,066	1,760	...	144	1,250	...	328	...	...	...	7,036	653	...	1,125	...	...	300
April	75,939	480	...	1,572	...	...	2	...	...	...	1,801½	...	13½	185	...	1,000	...
May	23,685	4	...	763½	...	500	...	...	...	...	5,375	...	...	1,320	...	1	...
June	27,286	1,075	1.800	222	...	250	544	...	...	...	4.570	...	75	1,655	...	...	...
July	15,760	780	...	158	...	3,000	...	...	...	400	2,743¾	...	...	2,093	...	200	...
August	4,205	6,107	364	76	...	3,400	3¼	144	...	...	6,930	...	57¾	710	...	7¾	...
September	21,773½	1,231½	500	...	9,700	...	1,572½	...	...	...	2.100	...	1½	317½	...	5	...
October	24.073	2,640	174	...	5,857	...	247	...	...	350	1,265	...	...	150	...	2	...
November	7.810	1.175	...	286	3.718	...	1,015	...	17,065	...	7 644	317½	19½	...	...	...	...
December	6	920	955	...	6	...	20½	...	1,860	...	235½	75	263	65	...	...	...
Total......	315.809½	53.247½	3.793	3.928	21.141	7.150	3.979¼	844	18 925	750	40.020¾	2 845½	558¼	8.435½	7	1,218¼	300

TABLE No. XXXIV (Continued)—*Showing Amount and Kind of Foodstuffs (Except Milk, Which Will Be Found in Table No. IV) Condemned by Months During* 1913.

MONTHS.	Corn Starch.	Sausage.	Bkry. Supplies.	Tallow.	Frogs.	Venison.	Miscellaneous Meats.	Candies.	Pies.	Macaroni.	Hominy.	Celery.	Cot. Sd. Oil.	Bread.	Canned Milk.	Canned Fish.	Canned Gds.	Beef Hearts.	Jelly.	Nuts.	Lobster.	Clams.	Pickles.
January	....	....	......	....	....	....	117	......	...	......	....	......	...	...	....	....	...	...	...	...	...	...	...
February	....	....	11,010	....	....	....	......	......	...	......	....	......	...	...	....	....	...	...	...	...	...	...	...
March	....	....	......	....	....	....	525¼	......	...	......	....	......	...	...	....	....	...	...	...	...	...	...	...
April	....	4½	......	478	....	....	333	......	...	......	....	......	...	...	....	....	...	...	...	...	...	...	...
May	....	....	......	....	15	....	327¼	25	...	2,000	45	......	200	...	....	....	...	...	...	...	...	...	...
June	....	....	......	....	....	....	991¼	......	...	......	....	......	...	...	....	....	40	...	20	...	6	...	10
July	....	....	......	300	....	....	1,239½	......	...	......	....	......	...	...	....	....	...	...	...	...	...	...	...
August	....	....	......	....	....	....	228½	......	...	......	....	......	...	...	....	....	...	...	...	...	...	...	...
September	....	....	......	....	....	....	953¾	420	...	......	....	......	...	...	....	9¼	...	...	...	...	...	900	...
October	....	2	......	....	....	....	977	1,580	6	......	....	......	...	3	10	....	64	4	...	...	...	...	...
November	....	....	......	....	....	....	63¾	......	...	......	....	......	...	...	....	....	...	...	...	95	...	...	...
December	6,205	....	......	....	....	66	301	11,192	...	11,657	....	1,550	...	...	....	....	...	...	...	88	...	...	3
Total	6,205	6½	11,010	778	15	66	6,057¼	13,217	6	13,657	45	1,550	200	3	10	9¼	104	4	20	183	6	900	13

TABLE NO. XXXIV (Continued)—*Showing Amount and Kind of Foodstuffs (Except Milk, Which Will Be Found in Table No. IV) Condemned by Months During* 1913.

MONTHS.	Butter.	Sauce.	Staple Groceries.	Ham.	Liver.	Sugar.	Flour.	Lard.	Buckwheat.	Barley.	Dried Peas.	Dried Beans.	Cakes.	Sauerkraut.	Total Amt. of Foodstuffs Condemned.
January	...	...	...	...	...	...	...	...	...	...	...	...	...	...	48,923½
February	...	...	...	...	...	...	...	...	...	...	...	...	...	...	72,820½
March	...	...	...	...	...	...	...	...	...	...	...	...	...	...	60,187¼
April	...	...	...	...	...	...	...	...	...	...	...	...	...	...	81,808½
May	9	...	...	...	...	...	...	...	...	...	...	...	...	...	34,269¾
June	...	10	...	...	...	...	...	...	...	...	...	...	...	...	38,554¼
July	...	...	...	29½	28	...	...	2	...	...	...	...	...	...	26,733¾
August	...	...	2,943	...	...	...	...	8	2,650	900	800	600	170	...	30,304¼
September	...	...	...	...	...	...	73½	...	...	...	...	...	...	...	39,558
October	½	...	...	...	...	4	...	...	...	...	...	...	29	...	37,437½
November	...	...	...	...	...	...	...	...	...	...	...	...	...	48,980	88,188¾
December	...	...	...	...	...	...	...	5	...	...	...	...	...	...	35,473
Total	9½	10	2,943	29½	28	4	73½	15	2,650	900	800	600	199	48,980	594,259

TABLE NO. XXXIV (Continued)—*Showing Amount and Kind of Foodstuffs (Except Milk, Which Will Be Found in Table No. IV) Condemned by Months During* 1913.

MONTHS	Syrup (Gallons).	Lemonade (Gallons).	Seltzer (Gallons).	Total Liquid Prds. Con. in Gals.	Canned Gds. (Cases).	C'n'd Peaches (Cans).	Wheat Flour (Bbls.).	Corn Meal (Bbls.).	Animals Condemned on Hoof.				
									Cattle.	Sheep.	Hogs.	Calves.	Total.
January	......	......	......	......	......	......	......	......	7	12	4	10	33
February	......	......	......	......	......	......	......	......	5	11	3	10	29
March	......	......	......	......	......	......	......	......	13	36	1	6	56
April	......	......	......	......	......	......	......	......	16	11	4	12	43
May	......	......	......	......	......	......	......	......	15	13	6	7	41
June	3¾	......	......	3¾	......	......	......	......	2	92	7	6	107
July	1½	7½	......	9	......	......	......	......	4	25	4	6	39
August	......	......	......	......	250	135	160	48½	3	21	3	5	32
September	......	......	......	......	......	......	......	......	4	23	4	9	40
October	4½	......	12	16½	......	......	......	......	2	17	3	11	33
November	......	......	......	......	......	......	......	......	5	9	5	8	27
December	......	......	......	......	......	......	......	......	4	17	3	5	29
Total	9¾	7½	12	29¼	250	......	......	......	80	287	47	95	509

CONDENSED MILK.

By R. Sewell Craig, B. S., *Assistant Chemist.*

The most available statistics show a 30 per cent. increase in the use of this type of milk in this city during the last five years, of which increase 10 per cent. occurred during last year. In view of the fact that condensed milk is yearly becoming a more conspicuous factor in our milk supply, it was deemed advisable to conduct an investigation as to the quality of the leading brands, and if possible, to render an adequate and enforceable standard by which to better control the sale in this city.

The term condensed milk is used to signify either the sweetened or the unsweetened variety, but the latter type is often designated by "evaporated cream." This product, however, as sold on the market, rarely ever resembles cream in any respect except consistency.

Condensed milk is made by evaporating milk in vacuum pans to the required degree of concentration and sealing in air-tight containers. The difficulties in the manufacture may well be mentioned and be given due consideration in fixing a standard.

The unsweetened variety is fresh milk condensed at the ratio of about two parts of fresh milk to one of evaporated milk. It is preserved by being sterilized by heat under pressure. Absolute sterility is essential and the milk is usually subjected to a temperature of from 226 to 245 degrees Fahrenheit. Without this sterilizing process it is possible to carry the evaporation nearly to dryness. But if the evaporation has been carried to too high a degree, the action of the sterilizing heat will precipitate a hard, insoluble curd which is not capable of being homogenized, and the product is in an unmarketable condition. Many factors influence the action of this sterilizing heat upon the milk, the most important of which is probably the care of the milk before it reaches the condensory. The period of lactation, the breed, care and feed of the cows also influence the composition and properties of milk.

The sterilizing process cannot be modified to any appreciable extent without endangering the product. Milk that is not sterile will ferment and in this condition is utterly worthless. On the other hand if the concentration has not been carried far enough, the butterfat may be separated on standing and churned in transportation; this product is also unmarketable. It will be observed that the limits of the degree of concentration are indeed narrow in this type of milk.

The difficulties governing the manufacture of sweetened condensed milk are few compared with the unsweetened type. This product is not sterilized by heat, but is preserved by the sugar which is added. Fresh milk is evaporated at the ratio of about 2½ to 2¾ : 1 and cane sugar added to the required amount. The principal difficulty is in having a product too thin to hold the sugar in suspension, the latter depositing at the bottom of the can. Thin milk is more liable to undergo decomposition than a more concentrated product. The breed of the cow may affect the butterfat content, but this is a factor which the manufacturer can control to a certain extent; so the difficulties in the preparation of this type to meet the Federal standard are indeed few as compared with unsweetened milk.

The Federal Food and Drugs Act, which went into effect January 1, 1907, defines condensed milk as follows:

"Condensed milk, evaporated milk, is milk from which a considerable portion of water has been evaporated and contains not less than twenty-eight (28) per cent. of milk solids of which not less than twenty-seven and five-tenths (27.5) per cent. is milkfat.

"Sweetened condensed milk is milk from which a considerable portion of water has been evaporated and to which sugar (sucrose) has been added, and contains not less than twenty-eight (28) per cent. of milk solids, of which not less than twenty-seven and five-tenths (27.5) per cent. is milkfat.

"Condensed skim milk is skim milk from which a considerable portion of water has been evaporated."

The law governing the handling and sale of condensed milk in this city may be abstracted as follows:

"No condensed or preserved milk shall be manufactured, sold or exchanged, or offered or exposed for sale or exchange, unless the same be manufactured out of pure, clean, healthy, fresh, unadulterated and wholesome milk, from which the cream has not been removed either wholly or in part, or unless the proportion of milk solids of same shall be in quantity the equivalent of twelve and fifty-one hundredths and of which milk solids three and fifty-one hundredths per centum shall be butterfats."

The only method of estimating the amount of fat and milk solids in the original milk is by calculation from the fat and milk solids in the condensed milk. This was done according to Leach ("Food Inspection and Analysis," page 192), assuming a solids-not-fat content of 9 per cent. This calculated percentage is at best only an approximation, however close it may be.

In this investigation twenty-three samples were collected, which included practically all the brands sold in this city.

The methods followed in the analyses were those given in United States Department of Agriculture Bulletin No. 107, pages 122 and 123. Cane sugar was estimated by difference.

Summarized Analytical Data.

No.	Net Weight, Ozs.	Stated Net Weight, Ozs.	Variety.	Price.	Percentage of Fat.	Percentage of Fat in Original Milk.	Percentage of Proteins.	Percentage of Lactose.	Percentage of Ash.	Percentage of Total Solids.	Percentage of Added Sugar.	Percentage of Milk Solids.
1...	6.1	6.0	Unsweetened.	$0.05	7.20	3.57	7.55	9.05	1.37	25.38	.21	....
2...	6.2	6.0	Unsweetened.	.10	8.10	4.31	7.47	7.57	1.23	25.03	.66	....
3...	6.7	6.4	Unsweetened.	.05	8.70	4.62	6.70	8.27	1.22	25.58	.69	....
4...	18.5	....	Unsweetened.	.05	7.80	3.93	6.79	9.18	1.22	25.63	.64	....
5...	16.1	16.0	Unsweetened.	10	7.80	3.60	6.59	9.71	1.29	27.14	1.75	....
6...	6.2	6.3	Unsweetened.	.05	7.80	3.71	7.35	8.93	1.45	26.78	1.25	....
7...	16.0	16.0	Unsweetened.	.08	8.10	4.12	6.84	9.31	1.46	26.67	.96	....
8...	16.0	16.0	Unsweetened.	.07	8.40	3.76	8.70	9.57	1.73	28.58	.17	....
9...	6.2	....	Unsweetened.	.05	7.65	3.68	6.66	10.79	1.18	26.35	.07	....
10...	6.2	....	Unsweetened.	.05	7.35	3.83	6.70	9.31	1.38	25.60	.86	....
11...	6.6	6.0	Unsweetened.	.05	7.20	3.44	6.87	9.18	1.48	26.01	1.28	....
12...	15.7	15.5	Sweetened...	.14	7.95	3.74	6.55	11.17	1.46	76.58	49.45	27.13
13...	14.6	14.5	Sweetened...	.10	9.75	4.40	7.76	10.47	1.69	75.76	49.09	26.67
14...	14.3	14.0	Sweetened...	.10	9.00	4.18	6.59	11.17	1.61	75.24	46.87	28.37
15...	14.2	....	Sweetened...	.10	8.25	3.87	6.64	10.98	1.59	73.79	46.33	27.46
16...	13.0	12.0	Sweetened...	.08	.06	.02	9.03	12.88	1.87	75.43	51.59	23.84*
17...	13.4	....	Sweetened...	.10	8.70	3.48	7.51	13.40	1.59	75.87	44.67	30.20
18...	12.8	....	Sweetened...	.09	8.40	3.97	6.55	10.98	1.63	71.72	44.16	27.56
19...	14.2	14.5	Sweetened...	.09	8.40	3.76	7.75	11.17	1.60	73.10	44.18	30.92
20...	13.9	....	Sweetened...	.10	7.70	3.05	8.00	12.88	1.79	74.88	44.51	30.27
21...	14.0	14.0	Sweetened...	.10	8.40	3.92	7.11	10.81	1.56	72.04	44.16	27.88
22...	11.4	11.5	Sweetened...	.08	8.70	3.35	8.56	13.14	1.69	74.62	42.53	32.09
23...	12.3	12.0	Sweetened...	.18	8.10	3.61	7.54	10.98	1.59	73.55	45.34	28.21

*Skimmed milk.

Summarized Analytical Data—Continued.

		Percentage of Fat.	Percentage of Fat in Original Milk.	Percentage of Proteins.	Percentage of Lactose.	Percentage of Ash.	Percentage of Total Solids.	Percentage of Added Sugar.	Percentage of Milk Solids.
Average contents—									
Sweetened milks............	Minimum...	7.70	3.05	6.55	10.47	1.46	71.72	42.53	26.67†
	Maximum...	9.75	4.40	8.56	13.40	1.79	76.58	49.45	32.09†
	Mean.......	8.49	3.76	7.32	11.56	1.62	74.29	45.57	28.80†
Unsweetened milks..........	Minimum...	7.20	3.44	6.59	7.57	1.18	25.03	.07	....
	Maximum...	8.70	4.62	8.70	10.79	1.73	28.58	1.75	....
	Mean.......	7.83	3.87	7.11	9.17	1.36	26.25	.77	....

†Does not include Sample No. 16.

From the above data it is evident that the Federal standard for sweetened condensed milk is reasonable and just and I therefore recommend that this be the standard by which to control the sale of this variety in this city.

The difficulty of incorporating the required 28 per cent. of milk solids in unsweetened milk is clearly shown. In fact only one sample contained over this amount. The average of the eleven samples is 26.25 per cent., which is 1.75 per cent. below the Federal standard.

A more recent food inspection decision of the United States Department of Agriculture takes into consideration the difficulties under which this product is manufactured and formulates a regulation in which the percentage of fat must be 7.8 per cent. and the sum of the milk solids and fat must equal 34.3 per cent. The fat content is one over which the manufacturer has more or less control and this modification would allow a small reduction in total solids with a corresponding increase in fat.

The following requirements have been abstracted from the United States Department of Agriculture Food Inspection Decision No. 130, on the composition of evaporated milk (i. e., unsweetened condensed milk):

(1) "It should be prepared by evaporating the fresh, pure, whole milk of healthy cows, obtained by complete milking and excluding all milkings within 15 days before calving and seven days after calving, provided at the end of this period the animals are in a perfectly normal condition.

(2) "It should contain such percentages of total solids and of fat that the sum of the two shall be not less than 34.3 per cent., and the percentage of fat shall be not less than 7.8 per cent.

(3) "It should contain no added butter or butter oil incorporated either with whole milk or skimmed milk or with the evaporated milk at any stage of manufacture."

SUMMARY AND CONCLUSION.

Twenty-three samples were examined, including twelve of the sweetened variety, and eleven of the unsweetened type. Practically all of the samples of unsweetened milk conformed to the requirements of the recent food inspection decision and the sweetened type to the Federal standard.

It is believed that these standards are adequate and enforceable and attainable by the manufacturer throughout the year, and I recommend their use as a local ordinance.

The use of the Federal standard for condensed skimmed milk is also recommended as an adequate regulation by which to control the sale of this product.

ANNUAL REPORT

OF

SYDENHAM HOSPITAL

Report of Superintendent of Sydenham Hospital.

BALTIMORE, December 31, 1913.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

I herewith submit the report of Sydenham Hospital for the year 1913. As introductory remarks, please allow me to state that no patient suffering with diseases that we are able to care for was refused admission when space was available, which accounts for the high percentage of deaths occurring within 24 hours after admission.

I am pleased to report that 1913 was a banner year in the number of patients admitted, outnumbering by far any previous record.

I would also call your attention to the number of refusals that were made necessary on account of lack of space and facilities. Sydenham Hospital accommodated one-ninth of the cases of scarlet fever and diphtheria alone that occurred in the city for 1913. The capacity at times was greatly taxed. Only a small fraction more could have been treated. I sincerely hope that in the near future greater facilities will be provided for the care of patients suffering with these and other minor infectious diseases.

I will only speak here to call your attention to the high cost per patient per day, the details of which you will find in the Superintendent's report.

I take this opportunity to express my sincere thanks and appreciation for the hearty co-operation that you have given the Hospital, and the patience you have shown me in my exorbitant demands upon your time.

Most cordially yours,

S. T. Nicholson, Jr., M. D.,
Resident Physician and Superintendent.

SYDENHAM HOSPITAL.

STAFF.

S. T. Nicholson, Jr., M. D.	*Superintendent.*
Miss M. J. Putts, R. N. (Resigned September 1, 1913.)	*Superintendent of Nurses.*
Miss Frances Michael, R. N. (Appointed October 1, 1913.)	*Superintendent of Nurses.*

ASSISTANT PHYSICIANS.

John C. Stansbury, M. D.	*January* 1 *to May* 1, 1913.
John F. Hogan, M. D.	*May* 1, 1913.

CONSULTING STAFF.

H. C. Davis, M. D.	*Consulting Otologist.*
Arthur M. Shipley, M. D.	*Consulting Surgeon.*

SUPERINTENDENT'S REPORT.

Sydenham Hospital has just passed through one of the busiest years of its existence, also one that points out its limitations and possibilities.

For the most part parents have signified their willingness to send their children early in the disease. Patients have also been sent here as a means of "last resort," and in no instance were they refused admission when accommodation was available. This, to some extent, accounts for the high mortality.

The demands for the treatment of the infectious diseases were greater than the Hospital could supply, particularly infectious diseases other than scarlet fever and diphtheria, which points out the great need of a miscellaneous ward in combination with a detention and observation ward.

The beginning of 1913 found the buildings in a rundown condition as well as a torn up lawn on account of sewer and heat line excavations. The first attempt was to take inventory of the urgent needs. So much had to be done that the cost of maintenance of patients was necessarily high, whereas, the cost of subsistence was very satisfactory and gratifying, being less than 33 cents per day per person. This could be markedly decreased if a refrigerating system were installed for the present facilities are only adequate to carry one day's provisions over to the next. As there were 12,844 days, buying in wholesale lots would decrease the maintenance. As to the cost of maintenance of patients, this neither can be reduced to any appreciable extent until the capacity is increased. There is on the pay roll of the Hospital an average of employes equal to that of patients admitted. A greater number of patients could be cared for at a proportionate decrease in cost. The fact must not be overlooked that the

Hospital is so far from the city that the stores will not deliver, which means the maintenance of a horse and wagon, as well as the hire of an extra man. Furthermore, the laundry bill should be reduced in 1914, owing to the laundry machinery that we are expecting to be installed early in the year.

During the year many improvements have been made, the expense of which came out of the appropriation for current expenses. This has been possible through the men regularly employed here, which saved the cost of labor.

On the grounds the following has been done:

About 2,000 cubic feet of grading.

One thousand two hundred square feet cement walks laid.

Two hundred and twenty-five linear feet cement curbing laid.

Two thousand bushels of ashes put on roads.

Cultivation of lawn grass and clover on plots immediately surrounding buildings.

Over 100 shade trees and bushes were planted.

Two large electric lights were installed in front of the Hospital and Administration Building.

Two hundred and fifty feet of terra-cotta piping to drain water from the tank and fire plug.

ADMINISTRATION BUILDING.

This building was practically renovated the latter part of 1912, papered, painted, new linoleum, etc. This year the only additions were new filing cases and cabinets.

HOSPITAL.

New gas machine mixer.

Corridors plastered and papered.

Diet kitchen and bathrooms painted.

New instruments, including operating table, microscope, etc.

Ice box (capacity one ton) was built.

New radiators for ward facing the northwest.

LAUNDRY BUILDING.

Painted inside and out.

Basement and one-half of first floor reconstructed for laundry machinery with 8 x 8 scantling on concrete pillars. Ceiling reinforced with double joists. Metal ceiling replaced plastering.

GARAGE AND STABLE.

Painted; concrete floors; new shower bath, lavatory and toilet for the men; new doors; shed for implements; new heating and water lines; new horse and cart; inclosure of garage; underground tank for gasoline.

The new home for the Superintendent was completed the latter part of December, which is an attractive addition to the group of buildings. It contains four bedrooms, one living-room, dining-room, kitchen and pantry. There is also a partial excavation for a cellar.

Plans are ready for the erection of a miscellaneous and detention ward with 20 separate rooms. This building was appropriated for three years ago; at that time, however, for a measles ward. A glance at the report of the Resident Physician will convince one of the wisdom of this substitution and the very urgent need of a building as is planned.

For the coming year the following additions are necessary, using the present year as an index:

First—Suitable quarters for nurses. At the present time the accommodations for nurses are far too inadequate, and in the event that the new building is erected without first providing for more nurses, the doors will be closed until this problem is met. There is not even room enough for nurses to operate the present ward when there is a big demand for admission to the Hospital. At present they contemplate using the new home for the Superintendent.

Second—Detention ward. Observation rooms. This building which has already been mentioned should be erected just as soon as the weather permits. It is hard to express on paper the crying need for such a building.

Third—Provision for the care of colored patients suffering with infectious diseases.

Fourth—Morgue and chapel.

Fifth—Removal of the telephone and telegraph poles.

Sixth—Storeroom for supplies.

Seventh—The installation of bath tubs in place of the shower baths. Shower baths are not suitable for a hospital in which children mostly are treated.

Among minor needs the following repairs and additions are necessary for the upkeep of the buildings and the grounds:

Radiators in sun parlor.
Tank painted.
Incinerator rebuilt.
New floors in laundry building.
Steps for Administration Building.
Signs to guide visitors and warn intruders.
Grounds around new cottage put in shape.

The broadening of the work of the Hospital must be thought of as the present capacity (maximum) is only thirty-five beds. However, this is out of my province, as it would mean the expenditure of a large sum of money.

In conclusion, I wish to thank my assistants, the nursing staff and employes, whose co-operation have made possible such results as we have had.

S. T. NICHOLSON, JR., *Superintendent.*

DETAILED STATEMENT OF OPERATING EXPENSES.

Administration.

Salaries, supervision and clerical		$3,475 00	
Stationery, postage and printing		83 96	
Car fare, telephone and telegraph		163 71	
Miscellaneous		187 07	
Library		152 78	
Total administration			$4,062 52

Professional Care of Patients.

Salaries—Nurses, maids and orderlies		$2,647 95	
Expenses—			
Apparatus and instruments		399 52	
Medical and surgical supplies		310 69	
Pharmacy		212 19	
Equipment for nurses		113 95	
Total professional care of patients			3,684 30

Department Expenses.

Salaries		$2,269 33	
Expenses—			
Dairy and eggs and ice	$1,640 01		
Provisions	916 76		
Meats	1,070 02		
Fruits and vegetables	606 15		
Total steward's department		4,232 94	
Ambulance and stable	$983 26		
Capital expenditures (horse, etc.)	624 47		
Laundry expense	710 07		
Housekeeping	159 28		
Laboratory	88 08		
		2,565 16	
Total department expenses			9,067 43
Amount carried forward			$16,814 25

Amount brought forward		$16,814 25

General House and Property.

Salaries	$1,220 40	
Expenses—		
Heat and light	192 73	
Maintenance (machinery, piping)	152 43	
Maintenance (building and real estate)	925 29	
Capital expenditure (grading, etc.)	655 00	
		3,145 85
Capital expense (rent, etc.)		302 58
Total operating expenses for the year		$20,262 68

Statement of Current Revenue, December 31, 1913, to December 31, 1914.

Private room patients	$342 13
Pay ward patients	313 55
Immigrant patients	264 00
Sale of laundry tubs	20 00
Total	$939 68
Total salary appropriation for 1913	$10,160 00
Total appropriation for expenses for 1913	10,650 00
Total	$20,810 00
Returned to the City Comptroller from salary appropriation	$547 32
Total operating expenses	20,262 68
Total	$20,810 00

GENERAL STATISTICS.

Patients in hospital at beginning of year	23
Patients in hospital at end of year	17
Maximum number of patients in hospital at one time	30
Minimum number of patients in hospital at one time	1
Daily average number of patients	17.52
Average number of days stay of patients, scarlet fever	34.72
Average number of days stay of patients, diphtheria	12.1
Total number of days treatment given patients	6,394
Average daily cost per patient	$3.168
Average daily cost per patient minus improvements to hospital that are permanent	$2.69
Total number of days board given patients and employes	12,844
Total number of deaths	21
Total number of admissions	239
Death rate from scarlet fever	$8^{1}/_{11}\%$
Death rate from scarlet fever, deducting deaths within 24 hours	$5^{5}/_{6}\%$
Death rate from diphtheria	$9^{7}/_{10}\%$
Death rate from diphtheria, deducting deaths within 24 hours	$3^{9}/_{10}\%$
Average cost of subsistence per person per day	$0.329

Number of Days Maintenance of All Persons by Months.

MONTHS.	Patients.	Employes.	Totals.
January	797	553	1,350
February	682	548	1,230
March	376	439	815
April	600	584	1,184
May	636	559	1,195
June	752	589	1,341
July	505	569	1,074
August	497	520	1,017
September	334	511	845
October	307	510	817
November	396	543	939
December	512	525	1,037
Total	6,394	6,450	12,844
Daily average	17.52	17.67	35.20

Admissions by Months.

DISEASES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.
Scarlet fever	14	12	11	16	16	14	12	11	5	3	8	10	132
Diphtheria	7	3	2	7	6	14	6	10	5	11	11	18	100
Scarlet fever & measles	...	...	1	...	3	...	...	...	...	...	...	...	4
Suspects	1	2	...	...	...	...	...	...	...	...	...	...	3
Totals	22	17	14	23	25	28	18	21	10	14	19	28	239

Cases Refused Admission.

DISEASES.	White.	Colored.	Total.
Scarlet fever	15	2	17
Scarlet fever and diphtheria	3	....	3
Measles	25	10	35
Diphtheria	11	9	20
Chicken-pox	1	....	1
Erysipelas	3	1	4
Whooping cough	1	....	1
Broncho-pneumonia following measles	1	....	1
Totals	60	22	82

REPORT OF RESIDENT PHYSICIAN.

The complete medical summary will be found in the "Detailed Medical Report," which is tabulated. I wish here to call attention to a few incidents that occurred during the year. On February 2 we had measles to break out in the scarlet fever wards. This spread so rapidly that it was deemed advisable to close the Hospital to all patients until the cross infection was under control. No patient was admitted during the month of March. Notwithstanding the fact that there were no admissions in this month, the total number of patients admitted greatly exceeded the record of former years. I am glad to report that there were no deaths resulting from the cross infection.

Three suspects were admitted. They turned out to be the following, viz.: one case of epidemic meningitis, one case of gumma of the soft palate, one case of mucous patches on the tonsils. Negative cultures from the nose and throat, as well as failures on the part of the patients to respond to antidiphtheritic treatment, resulted in their early discharge.

There were some refusals of cases in which the diagnosis was doubtful, due to the fact that there is no observation ward and the manifest unfairness to the patients already here and the ones to be admitted.

The mortality record is gratifying, excluding the deaths that occurred within 24 hours after admission. Out of a total of 10 deaths, due to diphtheria, six died within 24 hours.

It has been our method to open the ear drums when the first signs of inflammation appeared. Whether this is responsible or not for the prevention of mastoiditis, I can not say, although 136 cases of scarlet fever were admitted, not a single case of mastoiditis developed. One mastoid operation was done during the year and that was admitted as such in the sixth week of the disease.

Our plea is for a greater capacity for patients and the early admission of same.

The Hospital is greatly indebted to the consulting staff, Drs. Davis and Shipley, on whom numerous calls have been made and have always been answered cheerfully and promptly. I take this opportunity to express my gratitude to them, also Dr. Hogan, the Assistant Physician, whose aid and co-operation has been invaluable.

S. T. NICHOLSON, JR., M. D.,
Resident Physician.

Detailed Medical Report, 1913.

DISEASES.	Remaining. Jan. 1, 1913.			Admitted.			Discharged.				Remaining Jan. 1, 1914.		
	Male.	Female.	Total.	Male.	Female.	Total.	Recovered.	Not Treated.	Died.	Total.	Male.	Female.	Total.
Scarlet fever	3	8	11	41	34	75	81	....	4	85	1	....	1
Abscess of right tonsil	....	....	....	1	1	2	....	....	....	....	1	1	2
Arthritis. Ludwig's Angina	....	....	....	1	....	1	....	....	1	1	....	....	....
Cellulitis of eye. Suppurative adenitis arthritis	....	....	....	1	....	1	1	....	....	1	....	....	....
Diphtheria	....	....	....	1	1	2	2	....	....	2	....	....	....
Lobar pneumonia	....	....	....	1	....	1	....	....	1	1	....	....	....
Iritis	....	....	....	1	....	1	1	....	....	1	....	....	....
Measles	....	....	....	3	3	6	6	....	....	6	....	....	....
Measles; endocarditis	....	....	....	....	1	1	1	....	....	1	....	....	....
Measles; otitis media; adenitis	....	1	1	3	....	3	4	....	....	4	....	....	....
Otitis media	2	3	5	10	13	23	21	....	3	24	3	1	4
Otitis media; otorrhœa	....	1	1	....	1	1	2	....	....	2	....	....	....
Otitis media; broncho-pneumonia	....	....	....	1	....	1	1	....	....	1	....	....	....
Otitis media; adenitis	....	....	....	3	2	5	4	....	....	4	1	....	1
Otitis media; adenitis; laryngeal diph.; diph. vaginitis	....	....	....	....	1	1	1	....	....	1	....	....	....
Otitis media; adenitis; meningitis	....	....	....	1	....	1	....	....	1	1	....	....	....
Periostitis; cellulitis of neck; otitis media	....	....	....	1	....	1	1	....	....	1	....	....	....
Taenia saginata	....	....	....	....	1	1	1	....	....	1	....	....	....
Uraemia; Ludwig's Angina	....	....	....	2	....	2	1	....	1	2	....	....	....
Otitis media; measles	....	....	....	....	1	1	1	....	....	1	....	....	....
Otitis media; adenitis; lobar pneumonia; empyema	....	....	....	1	....	1	1	....	....	1	....	....	....
Otitis media; furunculosis	....	....	....	2	....	2	2	....	....	2	....	....	....
Mastoiditis; otitis media	1	1	2	....	1	1	3	....	....	3	....	....	....
Scrofulous glands of neck; tuberculosis	....	....	....	1	....	1	1	....	....	1	....	....	....
Mumps	....	....	....	1	....	1	....	....	....	....	1	....	1
Nephritis	....	1	1	....	....	....	1	....	....	1	....	....	....
	....	....	21	....	....	136	....	....	11	148	....	....	9

Detailed Medical Report, 1913. Continued.

DISEASES.	Remaining Jan. 1, 1913.			Admitted.			Discharged.				Remaining Jan. 1, 1914.		
	Male.	Female.	Total.	Male.	Female.	Total.	Recovered.	Not Treated.	Died.	Total.	Male.	Female.	Total.
Diphtheria—													
Pharangeal	1		1	28	35	63	53		4	57	2	5	7
Pharangeal; albuminuria				1		1	1			1			
Pharangeal; adenitis; streptococcus sore throat					1	1	1			1			
Pharangeal and meningitis					1	1			1	1			
Laryngeal	1		1	16	8	24	22		3	25			
Laryngeal; broncho-pneumonia				1	1	2			1	1		1	1
Laryngeal; broncho-pneumonia pul. edema					1	1			1	1			
Nasal					1	1	1			1			
Nasal; diphtheritic conjunctivitis; furunculosis					1	1	1			1			
Nasal; pharangeal					1	1	1			1			
Nasal; acute nephritis				2		2	2			2			
			2			98	82		10	92			8
Suspects—													
Admitting Diag. Scarlet fever, Discharge Diag. No disease					1			1					
Pharangeal diph. Gumma of the soft palate				1				1					
Pharangeal diph., Meningitis					1			1					
Scarlet fever, Measles					1			1					
Pharangeal diph., Syphilitic mucous patches					1			1					
				1	4			5					

ANNUAL REPORT

OF THE

TUBERCULOSIS DIVISION

Report of the Tuberculosis Division.

BALTIMORE, January 1, 1914.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

December 31, 1913, marked the close of the fourth year's work of the Tuberculosis Division of the Health Department. It is the object of this Division to bring under its supervision all cases of pulmonary tuberculosis who are living in the City of Baltimore, whether they are early or advanced, chronic or suspicious, active or arrested, of all classes, races and creeds, to give them nursing care when necessary, to distribute to them the prophylactic supplies provided by the State Board of Health; to arrange for them to enter sanatoria and hospitals; to advise them in regard to living and working conditions; and to bring them into contact with the proper people and agencies needed to accomplish the necessary changes in their environment, when they cannot arrange for them unaided.

The city is divided into sixteen districts, one nurse being detailed to each district, and the work supervised by the superintendent of the division. All the nurses are registered nurses and receive $75 per month and a reasonable amount of money for car fare and telephone messages. They are allowed two weeks' sick leave with pay and two weeks' vacation during the summer each year. This vacation is entirely too short to allow the nurses to recuperate sufficiently, mentally and physically, to bring back enough vitality and enthusiasm for another 11½ months' successful work. Baltimore at present is the only city of its size, if not the only city, that does not give a longer vacation to its nurses.

The nurses wear blue denim uniforms in winter and blue chambray ones in summer, and plain collars, coats, and hats which are not uniform. Each is furnished with a black leather bag in which to carry the prophylactic supplies. They report to the main office at 8.30 A. M. daily. Here they give an account of the work of the preceding day to the Superintendent, enter a record of it upon the patients' charts, stock their bags, and receive instructions for the day. At noon they spend an hour in their district offices for lunch, to meet patients and to restock their bags. There are eight district offices situated on the border lines of several districts. When their work allows, they leave the district at 4 P. M. There is about an hour's clerical work to do at home.

Tuberculosis Dispensaries.

In addition to their visiting, the nurses are on duty at stated times in the various tuberculosis dispensaries of the city, and they instruct their patients to come to these dispensaries for diagnosis and treatment when they are on duty. It has been found that the patients come to the dispensaries much more readily when they know the nurse with whom they have become acquainted will be there. The nurses in this way get the instructions from the physicians directly and at once, and thus the danger of misunderstanding them and of any delay in carrying them out is avoided. The nurses too become familiar with all the new ideas and methods as they develop.

We now have five tuberculosis dispensaries—one at the University of Maryland, open at noon three times a week; the Phipps Tuberculosis Dispensary at Johns Hopkins Hospital, open every morning, and our own three Health Department Tuberculosis Dispensaries in three different sections of the city, each one open two half-days a week—one at 602 South Bond street, one at 1418 Light street, and the third (opened in April, 1913) in the Neighborhood House at 1220 McCulloh street. Through this one we hope to reach the large negro population of this section. Our dispensaries are in charge of Dr. John E. O'Neill. We greatly need another physician, not only as an assistant at the two dispensaries, which have become too heavy for one man to handle, but to visit our patients in their homes. At present when patients become too ill to go to the dispensary, no matter how faithful they have been in their attendance there, we have great difficulty in getting medical care for them. There is no hospital accommodation for them, they are too far advanced to go to the sanatoria, and none of the tuberculosis dispensaries provide a visiting medical service. Not only for their own sake, but for the sake of those who come in contact with them during this very infectious stage, there is great need for expert medical supervision. Dr. O'Neill has been most obliging in visiting these patients for us, but it is difficult for him to do so for his time is fully occupied, and in spite of his willingness it is impossible for him to answer all the calls. The patients become very much attached to and have great confidence in the doctors they have been accustomed to in the dispensaries, and naturally want these same physicians when at home. These physicians know these cases well, and the confidence they have inspired would have great weight in getting the patients to carry out the orders, which it is so necessary to follow, to check the spread of the disease.

Patients.

Number of patients under supervision, January 1, 1913		3,107
Old patients returned to visiting list		101
New patients during the year		1,777
Total		4.985
Number of patients died during the year	867	
Number that left the city	356	
Lost (address unknown)	210	
Not tuberculous	152	
Total		1,585
Patients under supervision, December 31, 1913		3,400

3,400 patients are under the care of 16 nurses—an average of 212½ patients per nurse—entirely too many for any one nurse to handle well, though eight nurses are carrying more than this number, and one nurse has 270 patients.

NURSING STAFF.

While only 9 per cent. of these patients are ill in bed at home and require nursing care, it takes as long, and more frequently longer, to persuade a patient to change his manner of living, than to give a bed-bath or the most difficult nursing treatment required. A person who has slept with windows closed all his life and is afraid of the night air cannot be persuaded to have them open in a five-minute visit once a month; nor can another one who does not feel a bit sick, but is tired and has had a cold, be persuaded in the same length of time to believe that he is sick enough to require his giving up work and going to a sanatorium for six months, while his wife and children must bear the burden of his loss of wages; or while the husband and children must do without the care of the wife and mother. If visiting tuberculosis nursing is to be an educational campaign the staff must be doubled, for no nurse can give effective instruction and do constructive work with the present number of patients under her care. This work should not be done without supervision any more than hospital ward work should be done by individual nurses without a head nurse. This is not a reflection on any individual nurse, but it is impossible for any new nurse to be given 200 new patients, a new section of the city, and an entirely new field of nursing and expect her to do this well without instruction and supervision. To keep nurses who have been doing work for many years from getting into routine habits of treating all cases also requires supervision, and.

even with them, new problems are continually coming up which should be referred to a supervisor who is as intimately acquainted with the case as the nurse herself.

One supervising nurse cannot organize and direct the work of the entire staff of 16 nurses, and surely not a staff of double that number, do her own clerical work, write all the reports, represent the work at all places where it should be represented, be in the office all day to answer all inquiries and to give out supplies, and visit 3,400 patients sufficiently often to know them intimately enough to give the best and wisest decision and advice in each case.

There should be a visiting nurse to every 100 patients, and for every 10 or 15 visiting nurses an assistant supervising nurse, whose main duty should be to visit the patients under her often enough to be able to advise the nurse in each case and to know at once when a nurse has made a mistake or is unsuitable for the work. With a staff of this sort, some good results in educational work could be accomplished. At present our patients return from the sanatoria, where they have been watched and supervised constantly and visited by a doctor or nurse once a day at least, to the same surroundings and influences which they left and which were more or less responsible for their break-down, to be visited by a nurse only once a month or once in six weeks—for these are the patients who need us least. They make a successful stand for their newly acquired habits for a while, but without the constant encouragement, which frequent visits from the nurse give, they sooner or later succumb to the habits and influences of a lifetime. A paramount question today is: What is to be done with and for the ex-sanatorium patient? The answer should be: Give him sufficient supervision by a visiting tuberculosis nurse to help him establish in his old surroundings his new habits and mode of life. This cannot be done in Baltimore by 16 nurses and one supervising nurse for 3,400 patients, a number which is daily increasing.

The expense of this should not be borne entirely by the Health Department. We visit practically all the ex-patients from the Municipal Tuberculosis Hospital, the Jewish Home for Consumptives, Eudowood, and the State Sanatorium, and do all we can for them. We also send Eudowood and the State Sanatorium reports of these patients from time to time, for which, if they collected the information themselves, they would require a force as large as ours at least. This is also true of the State Board of Health. Their files would be so much dead timber without the information we are constantly giving them. It is true that all this extends the field of our work, but it is also true that the information we send to these institutions is valuable to them and requires much clerical work, as well as many visits to patients, from the members of our staff. It would require a considerable outlay on their part to do this without our assistance. It would be foolish for each of these to have a separate set of nurses visiting the same homes with us. It would take up the patients' time unnecessarily, and no new information would be gained. The lack of co-operation would undoubtedly result in misunderstandings which would be detrimental to the work in general. But could not some arrangement be made, as there has been in the case of our own tuberculosis dispensary nurses, for each institution to become responsible for the salaries of a certain number of nurses and a supervising nurse, these to be added to our staff, and the city divided into that many more districts? In this way, instead of several sets of nurses visiting the same people, each having too many patients to care for properly and consequently being able to do only very superficial work with very unsatisfactory results, the work of each nurse would be reduced to a manageable size, and the results obtained for each institution would be far more satisfactory and more nearly accurate, at a smaller expense than if each undertook to employ separately the necessary force to do the work well.

VISITS.

The nurses have made 79,289 visits during the year:

Visits to patients	69,743
Co-operative visits	3,075
Visits to arrange for fumigation	3,327
Visits to inspect after fumigation	3,144

This is an average of 20½ visits per day, and this allows only 14½ minutes to travel from patient to patient, as well as for a visit.

SOCIAL CONDITION OF PATIENTS.

Of the 3,400 patients on our list January 1, 1914, only 618, or 18 per cent., were known to any charitable institution:

Federated Charities	475
Hebrew Benevolent Society	76
St. Vincent de Paul	67
Total	618

White native Americans	2,191
Jews	393
Foreigners	326
Negroes	490
Total	3,400

Only 96, or 2⅞ per cent., object to the nurses' visits.

PHYSICAL CONDITION.

672 patients have not been diagnosed as positive cases of pulmonary tuberculosis, but are sufficiently suspicious to require a nurse to visit them until a more definite diagnosis can

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Only 96, or 2⅞ per cent., object to the nurses' visits.

PHYSICAL CONDITION.

672 patients have not been diagnosed as positive cases of pulmonary tuberculosis, but are sufficiently suspicious to require a nurse to visit them until a more definite diagnosis can

be made. Of the 2,728 positive cases—435 are early cases; 352 are chronic cases; 662 seem to be arrested.

Active cases		2,066
Adequately careful (all but 10 in sanatoria)	359	
Moderately careful	1,011	
Careless	696	
In institutions		349
At home		3,051
Able to work	1,946	
Able to work part time	666	
Unable to work, but not confined to bed	319	
Confined to bed	120	

All of the 120 who are confined to bed should be in hospitals, as each one in this stage of the disease is a great source of infection to those at home. If there were hospital accommodations sufficiently close to their homes to allow frequent visits from the families, there would be no more difficulty in getting these patients to go to hospitals when ill from this disease than when ill from any other cause. The well organized hospital has been established so long that the people very generally realize the comfort and care it gives to its patients. A well equipped and well managed ward for tuberculous patients in each hospital would not be nearly the source of danger that cases of pulmonary tuberculosis, unknown as such, are in surgical and medical wards. Frequent deaths from tuberculosis in all hospitals in the city show that the need for other treatment brings many people with this disease to them. It would also be a splendid opportunity for the medical students who are going out into general practice and the nurses who will engage in private duty nursing to be instructed in the proper care of these patients for whom they will so frequently be responsible later, not only as individual patients, but as members of a family and community whom they may possibly infect. Will they not be better able to assume this responsibility if trained in the proper methods of isolation and will they not be in less danger of personal infection in such wards safeguarded by knowing the disease for which they are caring, than as at present caring for patients with tuberculosis to which no attention is called because another condition is more important for the time being?

The 319 who are unable to work, but are not bed-ridden, and many, if not all, of the 666 who can work only part of the time, should be in sanatoria where they could be carefully watched, their work supervised, and their minds free from the worry which contact with the duties they should be doing, but are unable to do, is sure to bring. This cannot be done as long as the number of sanatorium beds does not meet the demand, and as a result the patients must leave at the end of six months, whether their condition warrants such a course or not.

Home Occupation of Patients Needing Sanatorium Care.

Among 101 patients needing sanatorium care January 1, 1914, for whom there was no accommodation, owing to insufficient provision for white patients and the lack of provision for negroes, 60 active open cases were by their own occupations brought into close personal contact with the domestic and social life of other residents of Baltimore, and 126 other people living in the same houses with them were brought into similar contact. This latter number we have not been able to have diagnosed, but it seems reasonable to suppose that in homes where the family income is so low that even the sick must work—that there is not sufficient nourishment, sufficient room for proper sleeping and living arrangements, nor that freedom from worry necessary to build up a resistance to this disease to prevent these contact cases from developing it, and sooner or later breaking down from it. The following table shows the occupation according to races:

Occupation According to Races.

Color.	Pa-tients.		Con-tacts.		Laundry at Home.	Laundry in Others' Homes.	Housework by the Day.	Sewing at Home.	Sewing in Others' Homes.	Nurse Maid.
	Total.		Total.							
White…	101	37	…	…	3	1	4	8	…	…
Black…	…	64	…	…	13	2	11	1	…	2
White…	…	…	126	33	5	1	3	13	5	…
Black…	…	…	…	93	36	16	19	1	1	4

Color.	Domestic Cook.	Domestic Waitress.	Butler.	Domestic Chambermaid.	General Maid.	Hotel Dishwasher.	Hotel Waiter.	Hotel Waitress.	Hotel Chambermaid.	Bartender.	Oyster Shucker.
White…	1	1	…	…	1	…	…	…	…	…	…
Black…	1	…	…	…	5	…	3	…	…	1	1
White…	1	…	…	…	…	…	…	1	1	…	…
Black…	10	3	4	1	2	1	4	…	3	…	…

Color.	Candymaker.	Boarding-house.	Drug Packer.	Charwoman.	School Janitor.	Total.	Laundry at Home and in Others' Homes.	Laundry at Home and Housework by the Day.	Laundry at Home and School Janitor.	Laundry and Sewing at Home.	Total.
White…	…	…	1	…	…	20	…	1	…	…	1
Black…	…	…	…	…	…	40	1	…	…	…	1
White…	1	1	…	1	…	33	…	…	…	…	…
Black…	…	…	…	…	1	106	10	1	1	1	13

While only one-seventh of all our patients are negroes, two-thirds of the number of open cases employed in homes or in personal service of some kind and three-fourths of the contact cases belong to this race.

For all the negro patients of Baltimore there are just 45 beds and these are in the Municipal Tuberculosis Hospital at Bay View. We have 496 beds for white patients, or 11 times as many, though the ratio between the two races in population is 1 to 7—the same as it is among our patients. For those who do not care whether the tuberculosis death rate is lowered, a study of the occupations of these negroes who have active cases of pulmonary tuberculosis may be interesting—nurse maids, cooks, laundresses, oyster shuckers, bartenders, and candymakers—and the fact that most of them are working because there are no hospital accommodations for them, and that most of the white ones are working because there is not a sufficient number of beds to allow them to stay until they become arrested cases may stir up an interest in and a support of a movement to get beds for these people.

EX-SANATORIUM PATIENTS.

Of the 3,051 patients at home, 1,173 have had sanatorium care—1,064 in one sanatorium, 97 in two sanatoria, and 12 in three sanatoria. All of them should have had this care at some time, but this is impossible with the present number of beds and many more than 97 have been in need of treatment for a longer time than could be allowed, and would have been benefited by an opportunity to undergo this treatment a second or third time.

PROPHYLACTIC SUPPLIES.

The following prophylactic supplies, provided by the State Board of Health, have been distributed by the nurses during the year:

	No.	Cost
Paper napkins	795,000	$492 90
Fillers	100,000	350 00
Disinfectant (bottles)	6,229	622 90
Tin cups	1,380	96 60
Waterproof pockets	650	26 00
Books of information	2,700	135 00
Total		$1,723 40

SOURCES FROM WHICH PATIENTS HAVE BEEN OBTAINED.

We have received our patients from many sources. The increase yearly in the number of patients reported to us by the physicians of Baltimore is very gratifying indeed, as it means that the nurses' work has won their co-operation and support, but it is not enough. During the four years that this Division has existed there has been an average of only one case reported yearly by every three doctors, while the average number of cases found yearly by each nurse, and diagnosed as pulmonary tuberculosis by the physician to whom they have been taken for examination, is 26.

Found by nurses	214
Reported by physicians	328
Patients, family, or friends	103
Instructive Visiting Nurse Association	75
Phipps Dispensary	406
Federated Charities	60
Maryland University Tuberculosis Dispensary	70
City Medical Agencies	27
Municipal Tuberculosis Hospital, city office	41
State Sanatorium	108
Eudowood	22
State Department of Health	185
Miscellaneous	76
Health Department Tuberculosis Dispensaries	62
Total	1,777

SPECIAL INVESTIGATIONS.

This Division has done two special pieces of work during the year—the investigation of a wholesale book and stationery store for the possible source of infection of several cases of pulmonary tuberculosis that had developed among its employes, and the preparation of an exhibit of the work of this Division since its organization, for the one of the Health Department given under the auspices of the Bureau of State and Municipal Research, at the City Club, November 13 to December 3, 1913.

In the former case the source of infection seemed to be outside of the place of employment, as all of the patients were closely related—some living in the same house, and no other employes had developed the disease. The investigation was undertaken at the request of the employers, who co-operated splendidly, and as a result changed their methods of cleaning the establishment to one which we considered more sanitary as well as more effectual.

The exhibit showed very markedly the increase in the work of this Division and the increase in its efficiency—for the increase in the personnel has been very much less than the increase in the amount of work done. The charts and tables compiled for it will be found at the end of the report.

RESULTS.

As a result of the nurses' work, 1,472 cases of pulmonary tuberculosis have been registered by them with the State Board of Health; 3,375 patients have been sent to dispensaries for diagnosis and treatment; and 770 have been sent to the various tuberculosis hospitals and sanatoria:

Municipal Hospital	298
State Sanatorium	295
Eudowood Sanatorium	116
Jewish Home for Consumptives	61
Total	770

One hundred and twenty-eight nuisances have been reported for abatement.

DIET.

We have asked for diet in only 23 cases:

Federated Charities	20
Hebrew Benevolent Society	3

All these requests have been for white patients:

Patients on the waiting list for sanatoria		11
Municipal Tuberculosis Hospital	5	
State Sanatorium	1	
Eudowood	4	
Jewish Home for Consumptives	1	
Special diet ordered by physician		1
Extra food ordered by physician		9
Patients awaiting diagnosis		2
Total		23

FUMIGATION.

There have been 3,293 houses inspected to arrange for fumigation. Of these it was found that it would be unnecessary to fumigate 130.

Investigations for fumigation after death, 1,107; not necessary.... 44

Fumigation investigation after removal:

To Bay View Hospital	410		"	"	60	
To State Sanatorium	460		"	"	12	
To Eudowood	132		"	"	10	
To Jewish Home for Consump.	76		"	"	1	
To other quarters	1,108		"	"	3	
		2,186				86
Total		3,293				130

As a result of the nurses' instructions in these cases, the follow precautions were found to have been taken, when the nurses inspected following fumigation:

After Death—	
Houses cleaned	838
Houses not cleaned	141
Houses vacant	65
Total number inspected	1,044
Bedding, etc., burned	402
Bedding, etc., sterilized	379
Rooms, papered, etc.	59
After Removal—	
Houses cleaned	1,527
Houses not cleaned	270
Houses vacant	258
Total number inspected	2,055
Bedding, etc., burned	163
Bedding, etc., sterilized	213
Rooms papered, etc.	108

RECOMMENDATIONS.

The work is increasing yearly, and consequently the time allowed each patient for nursing care, instruction and advice grows less and less. How long will this continue? The staff should be increased at once. We need double the number of nurses at least; we need assistants to the Superintendent to supervise the field work; we need a clerical force to keep accurate and careful records—not only to know what work is being done, but to be able to tell the effect of this work so that we may know what is of value and what is useless. At present the nurses are devoting two hours a day to this clerical work. This means that much less time in which to visit patients. As the number of patients increases, the clerical work increases and consequently both need more time, and both suffer from the lack of it. Would it not be more economical, as well as better for the patients, to employ stenographers trained for statistical work, to whom the nurses could dictate their records in much less time than they now spend in writing them? These clerks accustomed to this sort of work could do it far better than the nurses and less expensively. The nurses would have more time in which to visit patients, which is work that they only can do. We need more hospital beds for advanced cases, close to their homes, and we need a tuberculosis specialist to assist in the dispensaries and to visit our patients in their homes when they become too ill to go to the dispensaries and cannot enter hospitals because there is no provision for them. With more nurses on the visiting staff the need for a larger number of sanatorium beds would be lessened, because with better supervision at home the patients could return home sooner with less danger of the poor results that so frequently occur through the sudden cessation of careful watching under present conditions. And we need more beds for negro patients.

Respectfully submitted,

ELEANOR A. McI. JONES, R. N.,
Acting Superintendent Tuberculosis Division

Report of the Municipal Tuberculosis Dispensaries.

BALTIMORE, March 28, 1914.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

In submitting the following report for the year 1913 it may, perhaps, be conducive to a more intelligent and appreciative reading of the results if a few words of explanation be added concerning them.

Of the 898 cases 199 positive diagnoses were made; 252 put on what is termed the suspicious list; the remaining 447 regarded as negative. In many clinics the classification is somewhat more comprehensive, but with the end in view of obtaining practical results it was thought wise when the dispensaries were inaugurated to establish the above classification. It is not to be assumed that the entire number of negative cases means that these persons have not tuberculosis. It simply means that as far as we are able to find out they are not suffering from clinical tuberculosis; are not infectious; are not a danger to others, and are not in need of treatment. The class "suspicious" in our work means that these are due to clinical history, physical examination or both combined. Perhaps such cases are regarded, if we may use the phrase, as being tuberculous, unless proven otherwise. In each of these suspicious cases we endeavor to impress upon them the necessity of returning for re-examination, and though it may take three or even four examinations, if they will but do what we ask they will eventually be taken from the suspicious class and, of course, be either positive or negative. A final word as to this classification: It has been established for the purpose of diagnosis alone, having in mind, of course, the necessity for treatment, menace to others, etc., for it is fairly well established that practically all adults have the process located somewhere in their tissues—in some instances not active, however.

The large proportion of colored patients at the McCulloh Street Dispensary is explained by the fact that it was the deliberate purpose of the Department to place this Dispensary in such a location as to enable it to seek that class of cases, which is perhaps the greatest menace of all (far advanced negroes).

The "old patients returned' include ex-sanatorium patients, some in whom the positive diagnosis was made but who, for various reasons, could not (or would not) take the cure away from home; some cases suffering from lung conditions other than tuberculosis, and not a few who have been placed on the list for the various institutions and are awaiting their turn. The prescriptions given are to all of these.

Of the 144 who were advised to undergo sanatorium treatment, 81 entered the various institutions. This is perhaps one of the most, if not *the* most, important result mentioned in this report. It will be seen that only slightly more than 50 per cent. took advantage of the opportunity offered to regain their health. This means that the remainder, for the most part at least, continued in the same surroundings, undoubtedly infecting many, many others, until they finally died. The reasons given by these patients for not leaving home are, of course, various, but in the opinion of the writer by far the most frequent in the case of the women is that they can not leave their children, and in the case of the men that they cannot leave their families without someone to provide for them. It is quite true that in many instances the charity organizations of the city come forward and care for these families whilst the sick member is away taking the cure.

Acknowledgement is here made of the wonderfully effective work being done by these organizations in that regard, but there are still a large portion of these cases who will not submit to any such arrangement. It may be mentioned that here perhaps is one place where our future efforts in the fight against tuberculosis are to be made. Indeed, in one of our large cities many of us will recall that there is home hospital treatment, this being an establishment of what is in reality a hospital and sanatorium combined, where not only the patient but the entire family is accepted, the patient, of course, treated appropriately and the other members of the family being shown how to live properly, particularly how to avoid this disease. The reports of this work show that it is not difficult at all to get these people, when once they believe they are sick, to move to what is only another part of their own city, the family remaining together, and the other members who are able to work still continuing their various avocations.

As to the sputum examinations made (115), it would seem to be, and is, really, a small number as compared to the total number examined, but a large proportion of the cases are of the far advanced class where the examination of the expectoration would be really superfluous—negative result not in our opinion having any great weight as to the existence or non-existence of the disease. In another group expectoration has been absent at times, but the clinical diagnosis is plain enough, and, as most of us know, it is when we are able to detect the lesion before it becomes an open one that we frequently get the best results by placing the patient at once under treatment. When the work becomes further developed we shall surely be able to get the bacteriological examinations of the sputum in all cases; this, of course, is to be desired.

A reference to the number of patients referred to the dispensaries will show that we are having the effective co-operation of the various charity organizations and general dispensaries.

The time perhaps is now ripe for the establishment of additional far advanced hospitals for both white and colored patients, and our work would seem to show that it is really the most urgent need at present, for it is hardly necessary to be reminded that this large number of advanced cases with active expectoration—the sputum teeming with bacilli—are the greatest sources of danger, it having been estimated that one of these cases can readily infect several hundred persons in one day. This is particularly true of those colored persons who in various ways come in contact with a number of healthy families by means of laundry work, etc.

It seems to us that more progress could probably be made if an additional physician could engage in the work, his time being spent mainly in two ways: first, by assisting at the Bond Street Dispensary, from which location we are turning away patients on every dispensary day; and secondly, by having him visit the large number of cases who cannot come to any dispensary, who have no regular physician, and who are, as it were, merely "hanging fire" no diagnosis ever having been made.

We take advantage of this opportunity to extend our sincere thanks to all those who by their encouragement, co-operation and personal efforts have made a success of this work. In particular we would say a word of appreciation for the remarkably effective work of the nurses. Their most difficult problems are, to our mind, hardly understood; for at all times it means a full day's work for one of these young ladies, using all the tact and persuasion possible, to get one case to the dispensary.

Very respectfully,

JOHN E. O'NEILL, M. D.,
Superintendent.

Summary of Municipal Tuberculosis Dispensaries for the Year 1913.

DISPENSARIES.	New Patients.	Positive.	Suspicious.	Negative.	White.	Colored.	Old Patients Returned.	Prescriptions Given.	Advised Sanatorium.	Entered Sanatorium.	Sputum Examinations.	Sent by T. B. Nurses.	Sent by Other Nurses.	Sent by Friends.	Sent by Charity Organizations.	Sent by Other Dispensaries.	Referred to Other Clinics.
602 S. Bond St.	486	118	137	232	454	32	721	1,000	74	41	56	264	42	111	48	32	86
1418 Light St.	259	58	58	142	249	10	462	498	47	35	32	154	22	32	32	19	52
1220 McCulloh St.	153	23	57	73	75	78	84	190	23	5	27	104	4	14	11	9	11
Totals...............	898	199	252	447	778	120	1,267	1,688	144	81	115	522	68	157	91	60	149

CHARTS

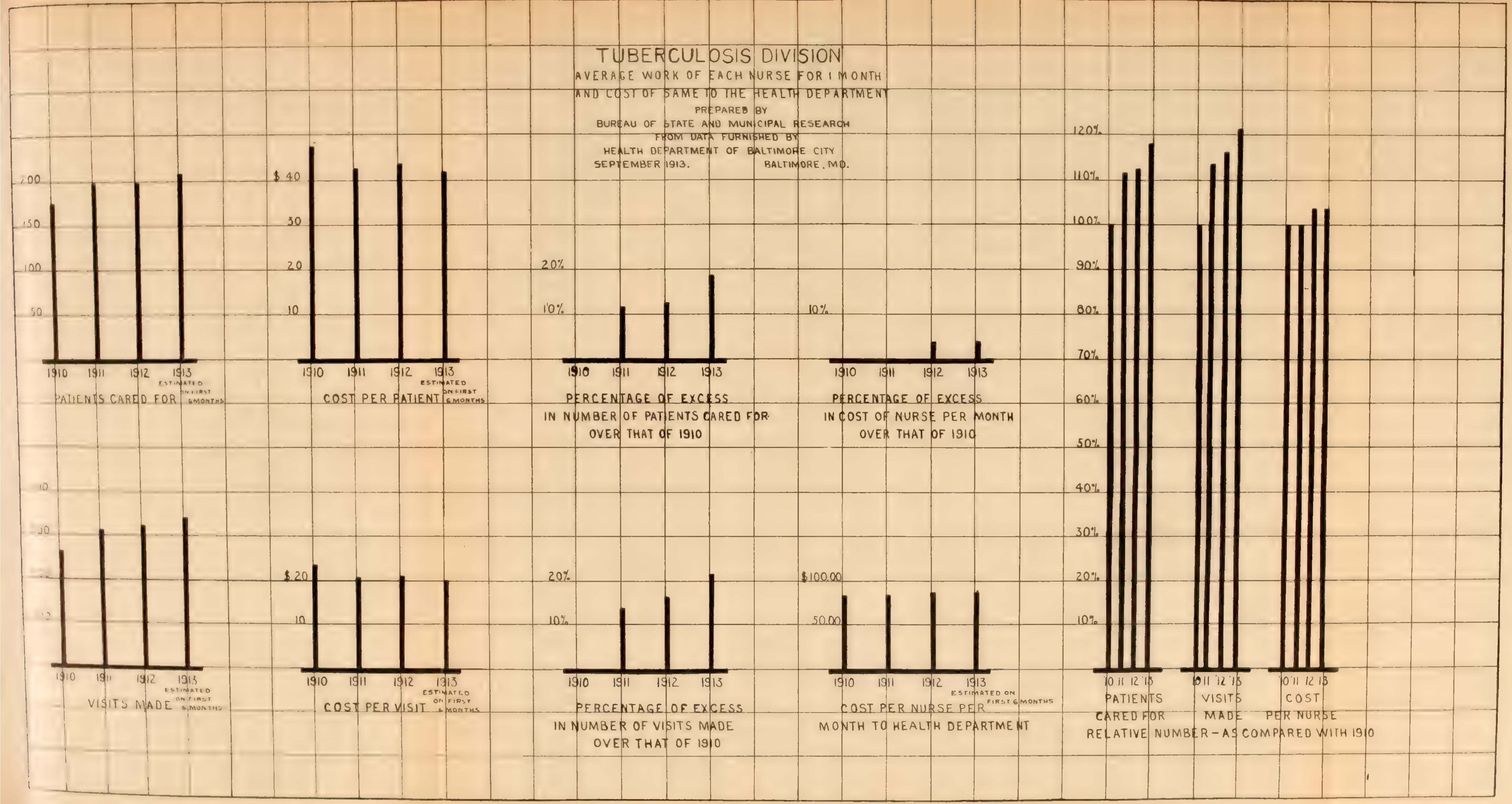
SHOWING THE WORK OF AND THE RESULTS ACCOMPLISHED BY THE

TUBERCULOSIS DIVISION

OF THE

HEALTH DEPARTMENT

FROM ITS ORGANIZATION, JANUARY, 1, 1910, TO JULY 1, 1913



TUBERCULOSIS DIVISION

OF THE

HEALTH DEPARTMENT.

NURSES' ROUTINE WORK

To VISIT all citizens of Baltimore who are suffering with pulmonary tuberculosis, unless consent is refused by the physician in charge. In these cases the patient is visited if a request is made by the patient or by a properly authorized, interested party.

To arrange for patients' ADMISSION TO A HOSPITAL OR SANATORIUM whenever possible when the disease is active—no matter whether it is incipient, moderately advanced, or advanced.

To give NURSING CARE to all who need it.

To ADVISE the patient and all living with him about the proper care of himself, his utensils and clothing, and the precautions it is necessary for the others to observe.

To DISTRIBUTE PROPHYLACTIC SUPPLIES.

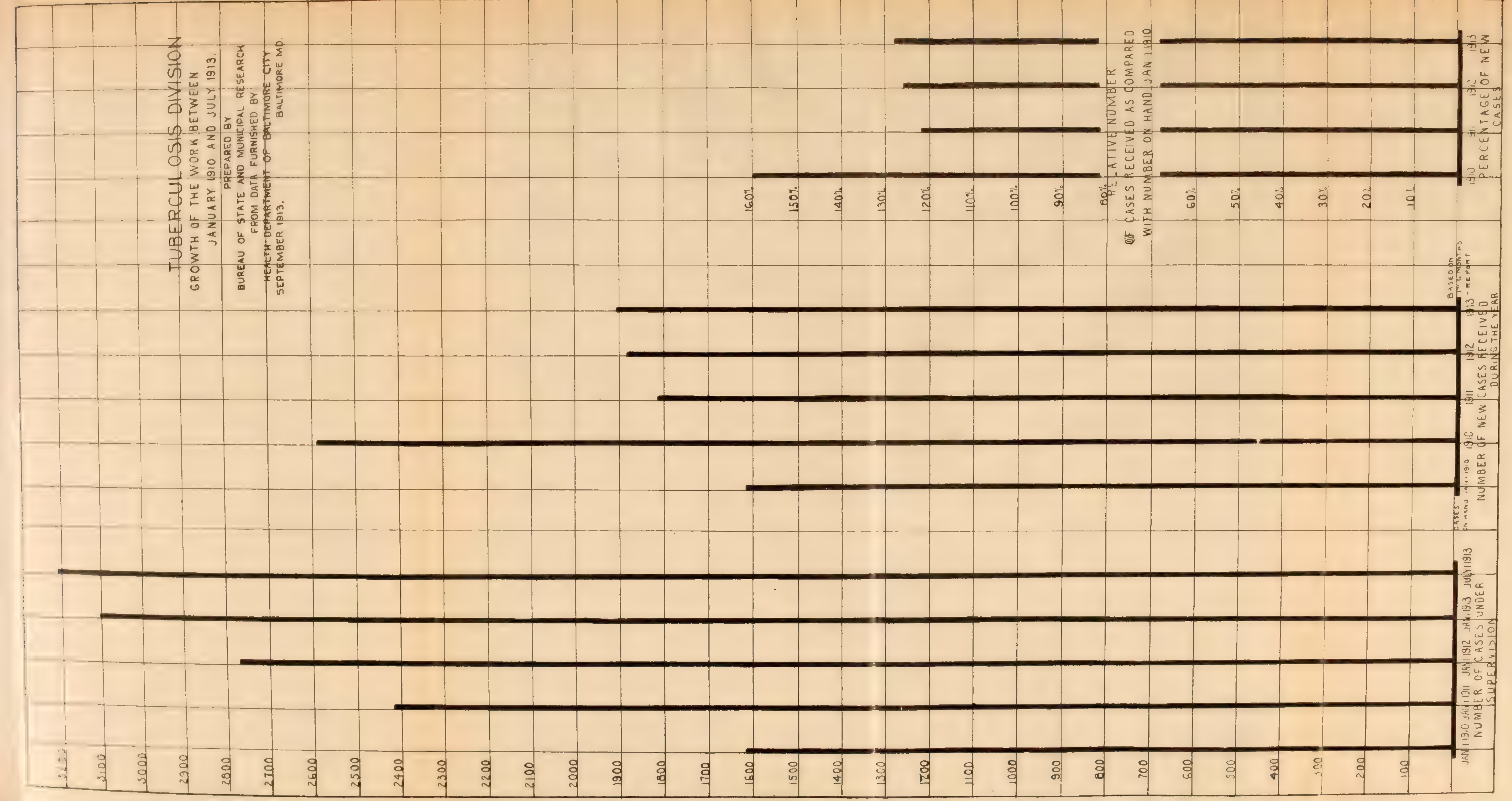
To arrange for all FUMIGATIONS after the patients have been removed to a sanatorium, hospital, or other quarters, or have died.

To urge the necessity and arrange for the STERILIZATION OR DESTRUCTION of all bedding, clothing, floor coverings and draperies used by patients during the active stage of the disease.

To INSPECT after all fumigations for tuberculosis.

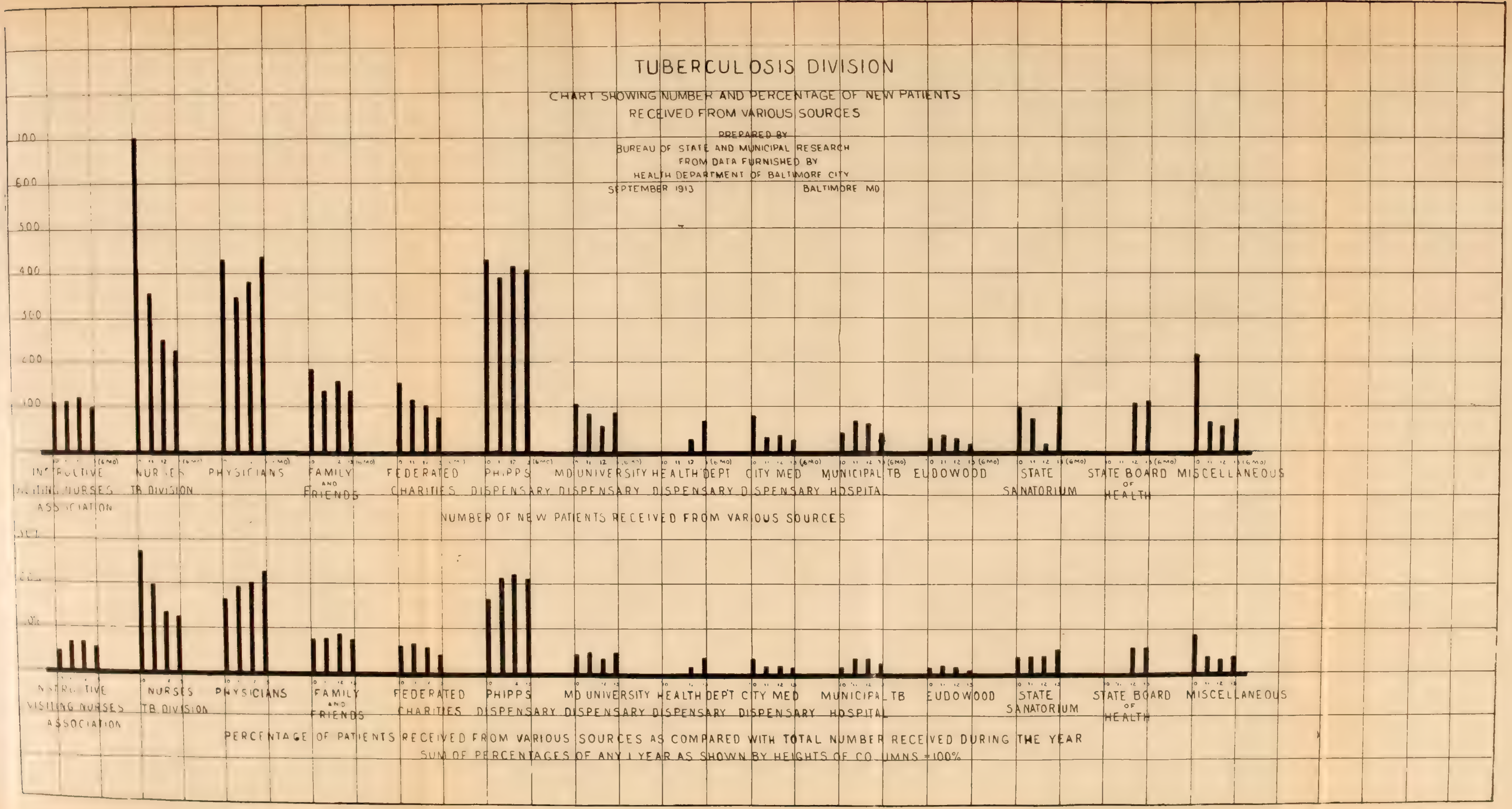
To RENDER all SOCIAL AID possible for the necessary changes in living and working conditions, by referring the patients to the proper persons and organizations, and personally conferring with them in regard to these changes and the necessity for them.

To assist in the tuberculosis dispensaries of the Health Department and of the University Hospital—so that THE NURSE will be A PERSONAL LINK between the tuberculosis dispensaries and the homes of the city in which the disease is found.



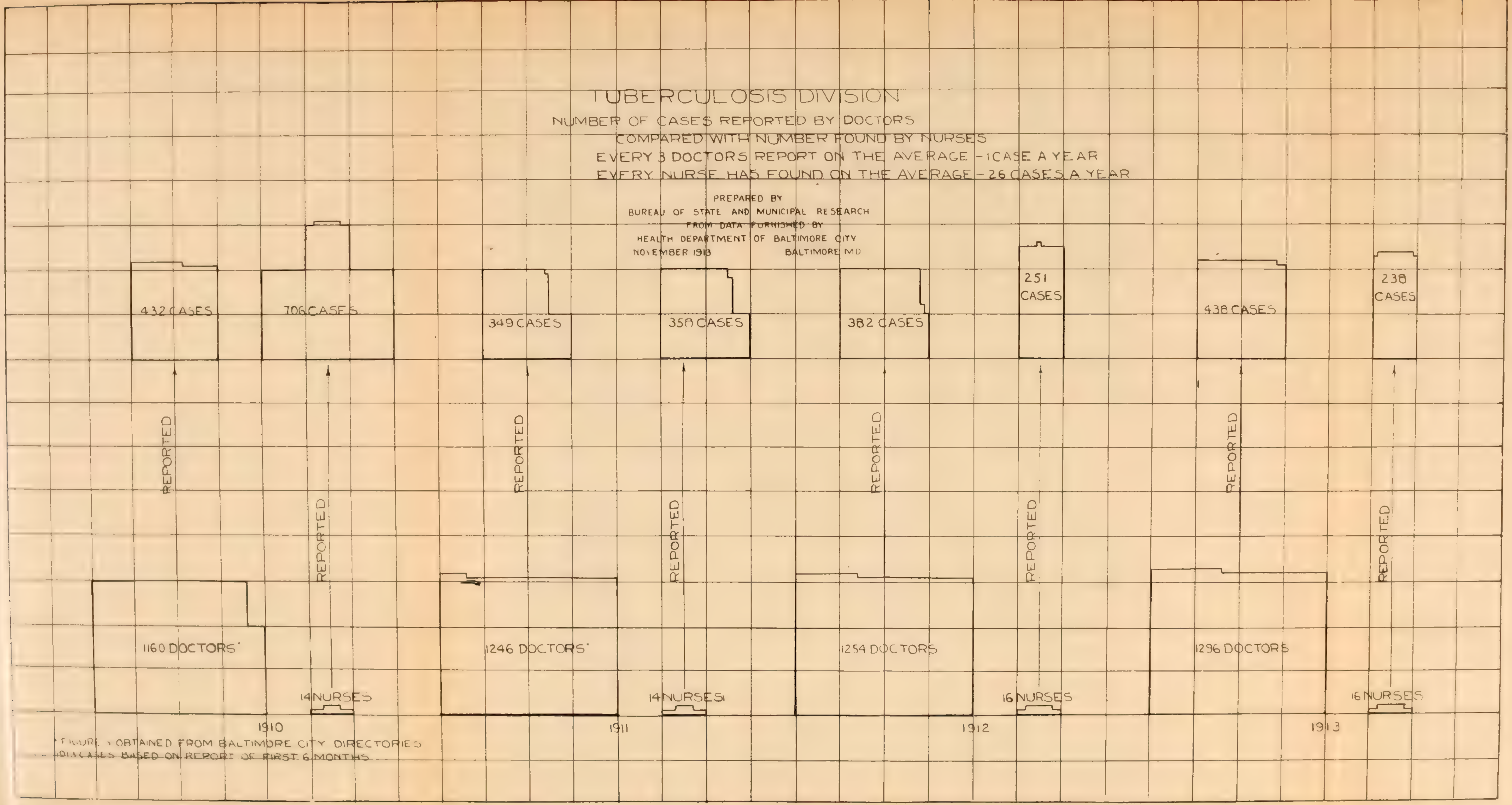
The Tuberculosis Division was organized January 1, 1910. Prior to that time the number of deaths from tuberculosis exceeded the number of cases registered with the Health Department. Since then the opposite has been true.

There has been a steady increase in the number of cases registered, and also in the number under supervision. Still OVER TWO-THIRDS of the tuberculosis CASES in the city are supervised. ONE-THIRD remain, who, either through ignorance or carelessness, are FREE TO SPREAD the DISEASE.



The INCREASE in the number of patients reported by physicians and family friends SHOWS that the PUBLIC is gaining more CONFIDENCE IN the Tuberculosis NURSES and is also learning from the instruction given by the Nurses the wisdom of having patients in the early stages of the disease properly cared for.

All cases reported by persons not qualified to make a diagnosis of the disease are examined by a physician before being registered



TUBERCULOSIS DIVISION

NUMBER OF CASES REPORTED BY DOCTORS
COMPARED WITH NUMBER FOUND BY NURSES
EVERY 3 DOCTORS REPORT ON THE AVERAGE - 1 CASE A YEAR
EVERY NURSE HAS FOUND ON THE AVERAGE - 26 CASES A YEAR

PREPARED BY
BUREAU OF STATE AND MUNICIPAL RESEARCH
FROM DATA FURNISHED BY
HEALTH DEPARTMENT OF BALTIMORE CITY
NOVEMBER 1913 BALTIMORE MD

* FIGURES OBTAINED FROM BALTIMORE CITY DIRECTORIES
- - 1913 CASES BASED ON REPORT OF FIRST 6 MONTHS

The SMALL PROPORTION of cases reported by doctors is DUE partially to the fact that many of the physicians of the city are specialists in some line and do not touch tuberculosis cases, but also because a great many of them, for PERSONAL REASONS, do not wish their patients to know that they have the disease, and so will not co-operate with the nurses in using preventive measures and thus guarding others from danger.

TUBERCULOSIS DIVISION

TREATMENT OBTAINED FOR PATIENTS

PREPARED BY
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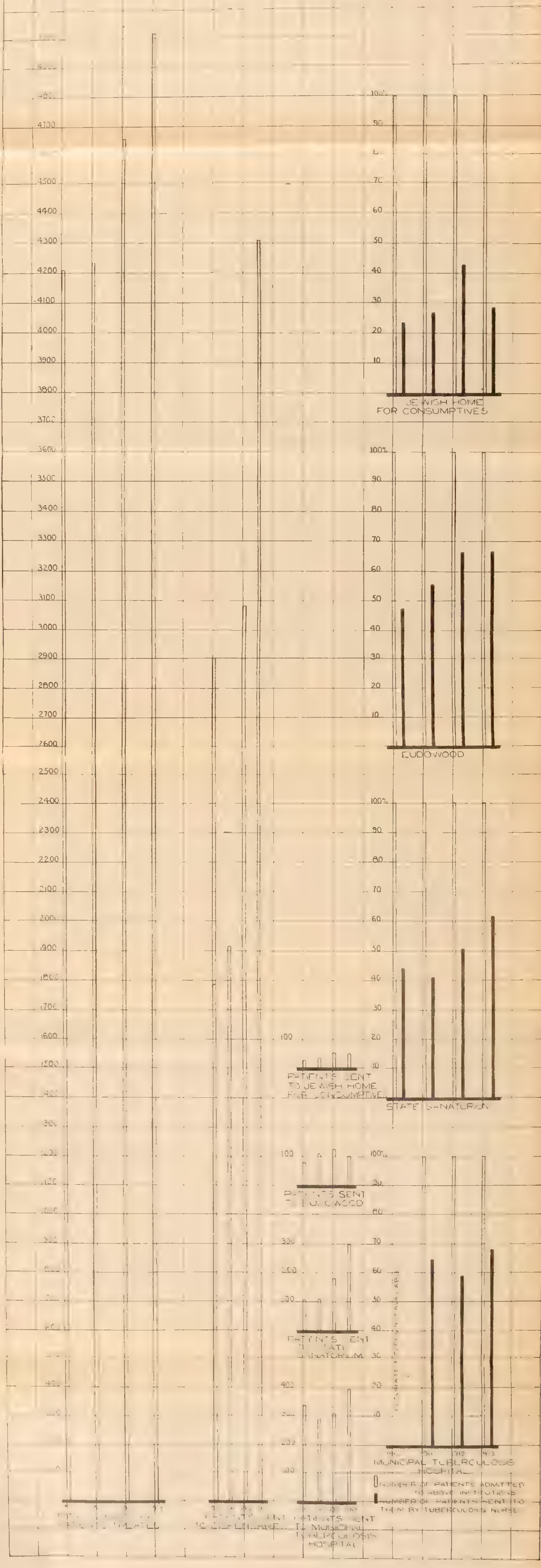
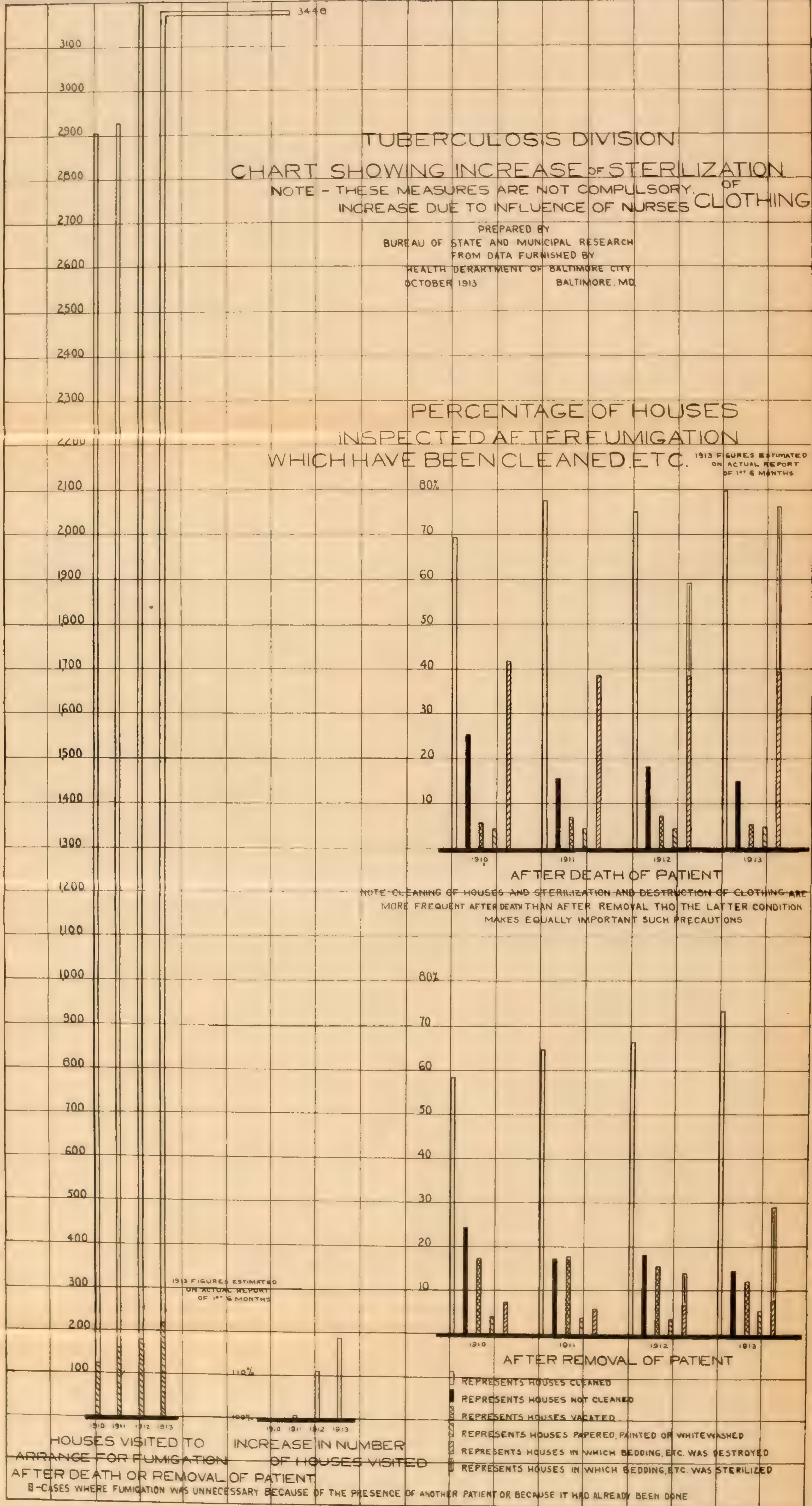
FROM DATA FURNISHED BY
HEALTH DEPARTMENT OF BALTIMORE CITY
NOVEMBER 1913 BALTIMORE MD.





TUBERCULOSIS DIVISION

CHART SHOWING INCREASE OF STERILIZATION OF CLOTHING

NOTE - THESE MEASURES ARE NOT COMPULSORY. INCREASE DUE TO INFLUENCE OF NURSES

PREPARED BY
BUREAU OF STATE AND MUNICIPAL RESEARCH
FROM DATA FURNISHED BY
HEALTH DEPARTMENT OF BALTIMORE CITY
OCTOBER 1913 BALTIMORE. MD.

PERCENTAGE OF HOUSES INSPECTED AFTER FUMIGATION WHICH HAVE BEEN CLEANED, ETC.

1913 FIGURES ESTIMATED ON ACTUAL REPORT OF 1st 6 MONTHS

AFTER DEATH OF PATIENT

NOTE - CLEANING OF HOUSES AND STERILIZATION AND DESTRUCTION OF CLOTHING ARE MORE FREQUENT AFTER DEATH THAN AFTER REMOVAL THO THE LATTER CONDITION MAKES EQUALLY IMPORTANT SUCH PRECAUTIONS

AFTER REMOVAL OF PATIENT

- ▯ REPRESENTS HOUSES CLEANED
- ▮ REPRESENTS HOUSES NOT CLEANED
- ▩ REPRESENTS HOUSES VACATED
- ▨ REPRESENTS HOUSES PAPERED, PAINTED OR WHITEWASHED
- ▧ REPRESENTS HOUSES IN WHICH BEDDING, ETC. WAS DESTROYED
- ▥ REPRESENTS HOUSES IN WHICH BEDDING, ETC. WAS STERILIZED

HOUSES VISITED TO ~~ARRANGE FOR FUMIGATION~~ AFTER DEATH OR REMOVAL OF PATIENT

1913 FIGURES ESTIMATED ON ACTUAL REPORT OF 1st 6 MONTHS

INCREASE IN NUMBER ~~OF HOUSES VISITED~~

▥ - CASES WHERE FUMIGATION WAS UNNECESSARY BECAUSE OF THE PRESENCE OF ANOTHER PATIENT OR BECAUSE IT HAD ALREADY BEEN DONE

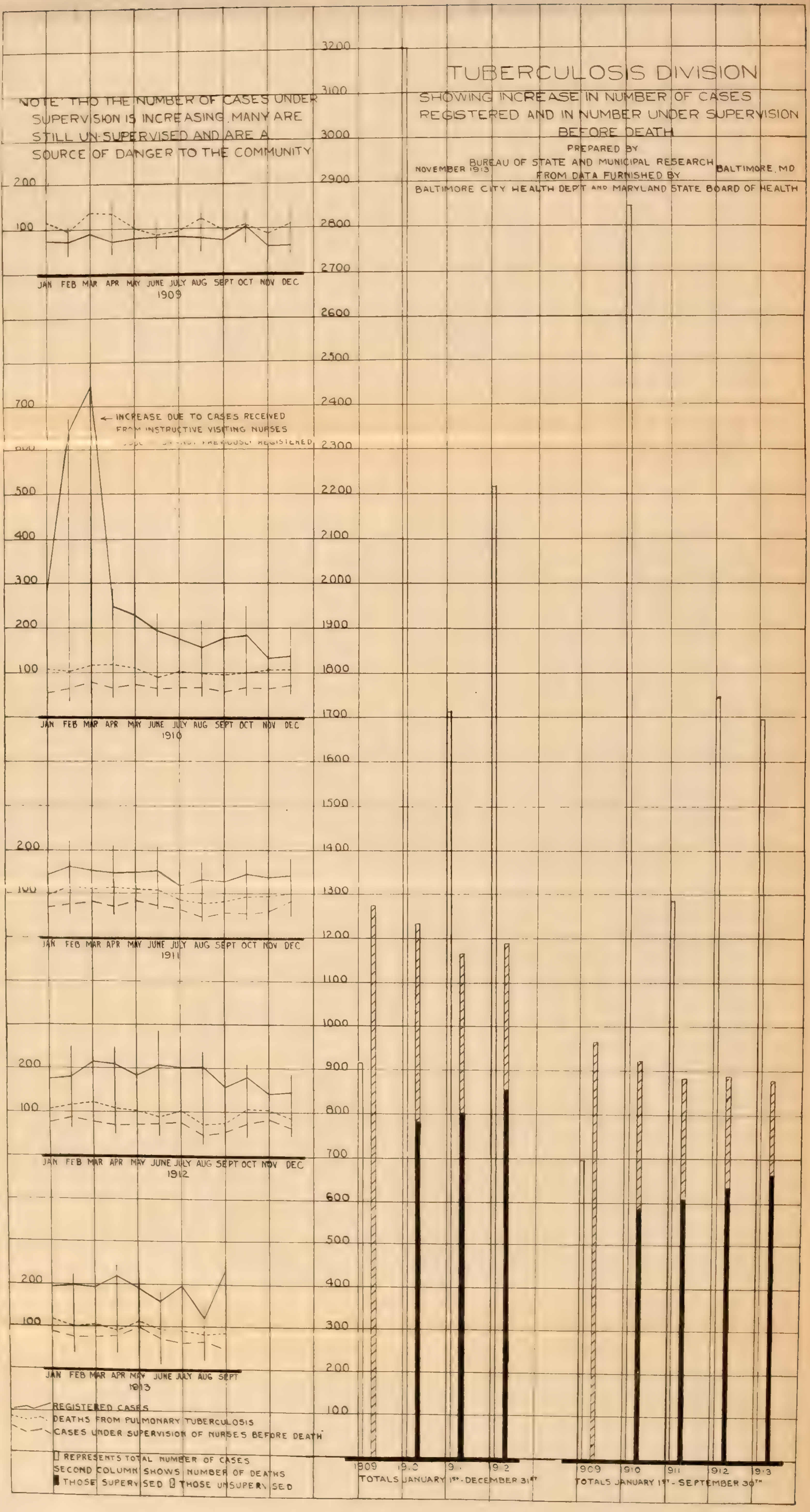
3448
3100
3000
2900
2800
2700
2600
2500
2400
2300
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
1910
1911
1912
1913
110%
100%
1910
1911
1912
1913
80%
70
60
50
40
30
20
10
1910
1911
1912
1913
80%
70
60
50
40
30
20
10
1910
1911
1912
1913

TUBERCULOSIS DIVISION

SHOWING INCREASE IN NUMBER OF CASES REGISTERED AND IN NUMBER UNDER SUPERVISION BEFORE DEATH

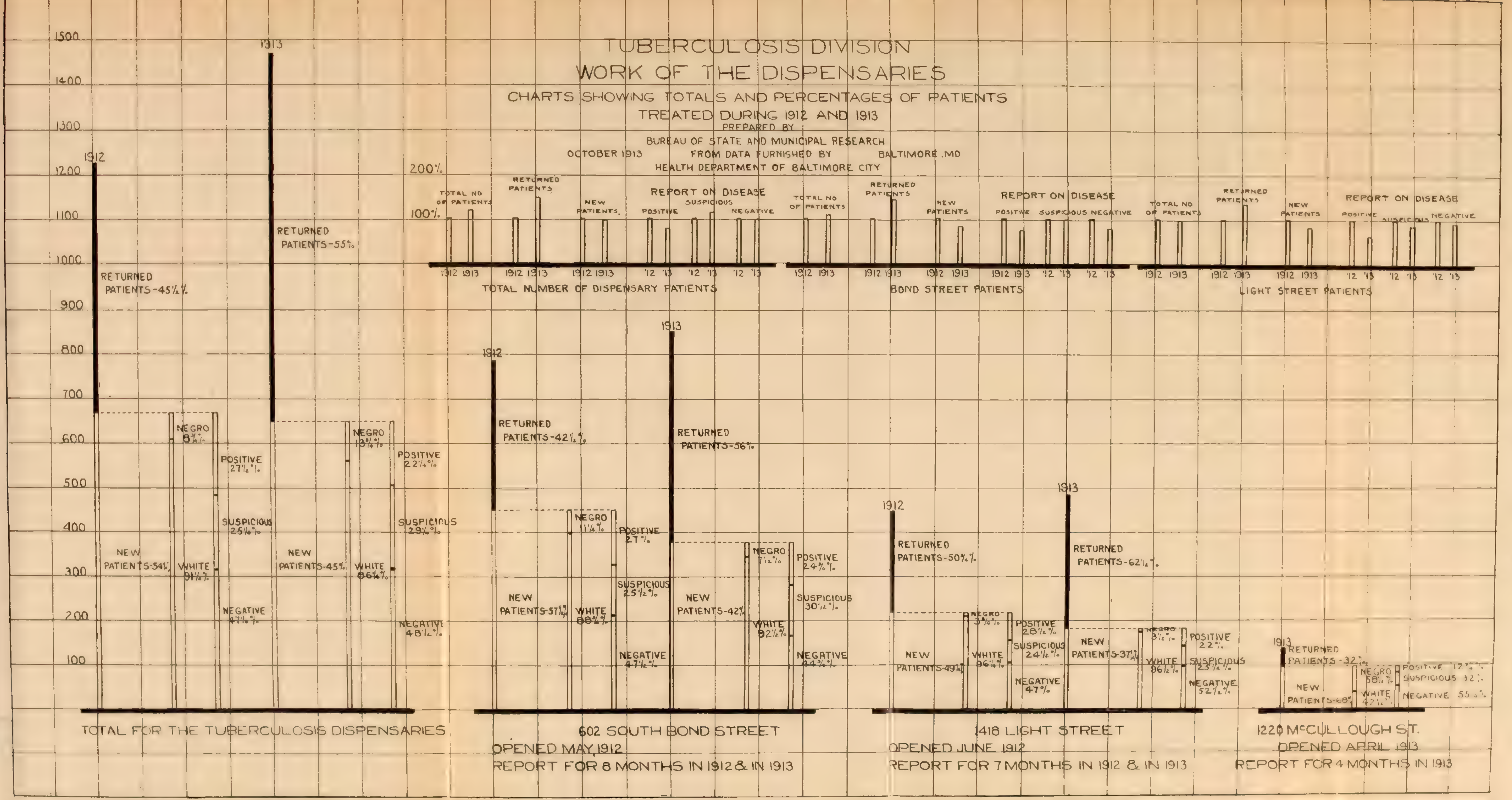
PREPARED BY
BUREAU OF STATE AND MUNICIPAL RESEARCH
BALTIMORE, MD
NOVEMBER 1913
FROM DATA FURNISHED BY
BALTIMORE CITY HEALTH DEP'T AND MARYLAND STATE BOARD OF HEALTH

NOTE: THO THE NUMBER OF CASES UNDER SUPERVISION IS INCREASING, MANY ARE STILL UN-SUPERVISED AND ARE A SOURCE OF DANGER TO THE COMMUNITY



REGISTERED CASES
DEATHS FROM PULMONARY TUBERCULOSIS
CASES UNDER SUPERVISION OF NURSES BEFORE DEATH

▯ REPRESENTS TOTAL NUMBER OF CASES
SECOND COLUMN SHOWS NUMBER OF DEATHS
█ THOSE SUPERVISED ▨ THOSE UNSUPERVISED



TUBERCULOSIS DIVISION
WORK OF THE DISPENSARIES
CHARTS SHOWING TOTALS AND PERCENTAGES OF PATIENTS TREATED DURING 1912 AND 1913
PREPARED BY
BUREAU OF STATE AND MUNICIPAL RESEARCH
FROM DATA FURNISHED BY
HEALTH DEPARTMENT OF BALTIMORE CITY
OCTOBER 1913
BALTIMORE, MD

TOTAL NUMBER OF DISPENSARY PATIENTS

BOND STREET PATIENTS

LIGHT STREET PATIENTS

TOTAL FOR THE TUBERCULOSIS DISPENSARIES

602 SOUTH BOND STREET
OPENED MAY 1912
REPORT FOR 8 MONTHS IN 1912 & IN 1913

1418 LIGHT STREET
OPENED JUNE 1912
REPORT FOR 7 MONTHS IN 1912 & IN 1913

1220 McCULLOUGH ST.
OPENED APRIL 1913
REPORT FOR 4 MONTHS IN 1913

1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
200%
100%
TOTAL NO OF PATIENTS
RETURNED PATIENTS
NEW PATIENTS.
REPORT ON DISEASE
POSITIVE
SUSPICIOUS
NEGATIVE
1912 1913
'12 '13
1912
1913
RETURNED PATIENTS-45½%
NEW PATIENTS-54½%
NEGRO 8¾%
WHITE 91¼%
POSITIVE 27½%
SUSPICIOUS 25¼%
NEGATIVE 47¼%
RETURNED PATIENTS-55%
NEW PATIENTS-45%
NEGRO 13¾%
WHITE 86¼%
POSITIVE 22¼%
SUSPICIOUS 29¼%
NEGATIVE 48½%
RETURNED PATIENTS-42½%
NEW PATIENTS-57½%
NEGRO 11¼%
WHITE 88¾%
POSITIVE 27%
SUSPICIOUS 25½%
NEGATIVE 47½%
RETURNED PATIENTS-56%
NEW PATIENTS-42%
NEGRO 7½%
WHITE 92½%
POSITIVE 24¾%
SUSPICIOUS 30½%
NEGATIVE 44¾%
RETURNED PATIENTS-50¾%
NEW PATIENTS-49¼%
NEGRO 3¾%
WHITE 96¼%
POSITIVE 28½%
SUSPICIOUS 24½%
NEGATIVE 47%
RETURNED PATIENTS-62½%
NEW PATIENTS-37½%
NEGRO 3½%
WHITE 96½%
POSITIVE 22%
SUSPICIOUS 25½%
NEGATIVE 52½%
RETURNED PATIENTS-32%
NEW PATIENTS-68%
NEGRO 58½%
WHITE 47½%
POSITIVE 12½%
SUSPICIOUS 32%
NEGATIVE 55½%

The DISPENSARIES were not opened until 1912, and one in 1913, but they have already PROVED their great WORTH to the community. Though the number of new patients treated in 1913 is less than that of 1912, the number of RETURN VISITS is greater—SHOWING that the dispensaries are of an EDUCATIONAL VALUE and that they are teaching the patients to take greater precautions before the disease reaches an advanced stage.

NOTE—When the dispensaries were opened the Health Department sent a special request to physicians of the city to turn over to the dispensaries all cases of pulmonary tuberculosis not convenient to handle in ordinary office practice:

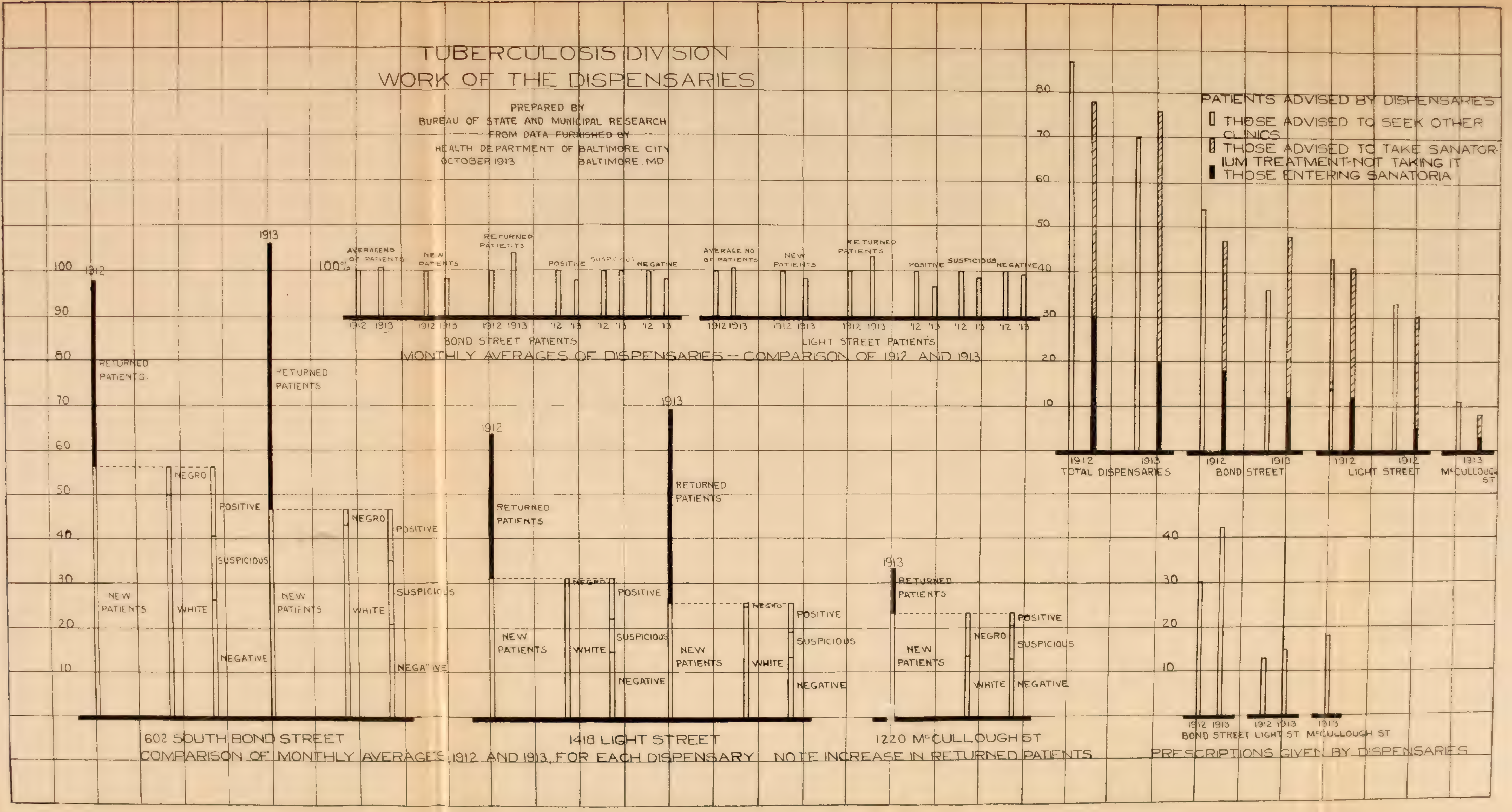
NUMBER OF CASES RECEIVED FROM PHYSICIANS BY DISPENSARIES—*NONE.*

THESE CHARTS BRING OUT THE FOLLOWING POINTS:

1. CONFIDENCE of the PATIENTS.
2. OPPORTUNITY for EARLY TREATMENT
3. CONFIDENCE of the FRIENDS of the patients.
4. LACK of Sanatorium ACCOMMODATION
5. CHARACTERISTICS of NEGRO patients.
6. METHOD of TREATMENT

TUBERCULOSIS DIVISION
WORK OF THE DISPENSARIES

PREPARED BY
BUREAU OF STATE AND MUNICIPAL RESEARCH
FROM DATA FURNISHED BY
HEALTH DEPARTMENT OF BALTIMORE CITY
OCTOBER 1913 BALTIMORE, MD



MONTHLY AVERAGES OF DISPENSARIES — COMPARISON OF 1912 AND 1913

COMPARISON OF MONTHLY AVERAGES 1912 AND 1913, FOR EACH DISPENSARY NOTE INCREASE IN RETURNED PATIENTS

PRESCRIPTIONS GIVEN BY DISPENSARIES

REPORTS OF

Chief Tenement Inspector

Superintendent of Fumigations and Burials

Superintendent of City Morgue

Inspector of Plumbing

Registrar's Clerk

Complaint Clerk

Commissioner's Clerk

Burial Permit Clerks

Nuisance Clerk

Index Clerk

Clerk to Bureau of Vital Statistics

Report of Chief Tenement Inspector.

BALTIMORE, December 31, 1913.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

As Chief Tenement Inspector, I beg leave to submit my annual report for the year 1913, as follows:

Houses inspected	2,842
Houses reinspected	9,044
Complaints investigated	136
Notices issued	2,037
Nuisances ordered abated	4,576
Nuisances abated	2,919
Nuisances open or pending	3,133
Special inspections	982
Warrants sworn out	6
Warrants dismissed after nuisances abated	5
Convicted and fined twenty dollars and costs ($21.45)	1

Respectfully yours,

DANIEL W. SMITH,
Chief Tenement Inspector.

Report of Superintendent of Fumigations and Burials.

BALTIMORE, January 1, 1914.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

I herewith submit the report of my division for the year 1913:

Fumigations Classified by Diseases.

	1912.	1913
Bright's disease	1	......
Bronchitis	6	5
Cancer	18	23
Chickenpox	3	1
Cerebro spinal meningitis	12	3
Diphtheria	928	1,122
Erysipelas	8	7
Gangrene	.....	1
Infantile paralysis	17	......
La grippe	.....	1
Measles	4	33
Pneumonia	9	7
Scarlet fever	652	948
Septic pharyngitis	20	......
Smallpox	11	42
Tetanus	1	......
Tuberculosis	3,011	3,191
Typhoid fever	43	49
Tonsilitis	1	2
Unknown	25	1[illegible]
Whooping cough	2	1
Totals	4,772	5,4[illegible]3

Results of Fumigation.

	1912.	1913.
Negative	3,994	4,860
Positive	244	319
Unreturned	254	186
No cultures	280	48
Totals	4,772	5,413

Number of Rooms Fumigated.

Diseases—	1912.	1913.
Diphtheria	1,844	2,148
Miscellaneous	441	308
Smallpox	100	218
Scarlet fever	1,371	1,832
Tuberculosis	14,268	14,053
Totals	18,024	19.459

Statement of dead bodies turned over to the Anatomical Board by the Commissioner of Health, under Act of the General Assembly of Maryland, Chapter 163, 1882, to be used only to promote medical schools of Baltimore city, January 1 to December 31, 1913, inclusive:

	1912	1913.
Adults	277	240
Between 1 and 5 years	20	25
Under 1 year	168	191
Still births	305	364
Totals	770	820

	1912.	1913.
Male	461	502
Female	282	286
Unknown sex	27	32
Totals	770	820

	1912	1913
White	328	310
Black	434	496
Unknown	8	14
Totals	770	820

The bodies were received from the following hospitals and institutions:

	1912.	1913.
Bay View	124	115
Church Home and Infirmary	4	3
Franklin Square Hospital	10	16
Hebrew Hospital	.....	2
Homeopathic Hospital	10	6
Johns Hopkins Hospital	58	62
Maryland General Hospital	51	46
Mercy Hospital	43	35
Mount Wilson, Md	13	9
Miscellaneous (private homes)	529	317
Morgue	78	74
Nursery and Child's Hospital	8	21
Northwestern Police Station	17	6
Northeastern Police Station	3	9
Northern Police Station	6	4
Penitentiary	2	......
Presbyterian Eye and Ear Hospital	1	......
Robert Garrett Hospital	2	3
St. Elizabeth's Home	16	29
St. Joseph's Hospital	7	9
St. Luke's Hospital	5	2
University Hospital	45	51
Western Police Station	4	1
Totals	770	820

Disposition of Bodies.	1912.	1913.
Bay View	1	......
Baltimore Medical College	127	9
Church Home and Infirmary	.....	2
College of Physicians and Surgeons	309	429
Franklin Square Hospital	.....	1
Hebrew Hospital	.....	3
Johns Hopkins Medical School	155	246
Maryland Homeopathic Hospital	1	......
Maryland Medical College	17	2
Presbyteran Eye and Ear Hospital	1	......
St. Luke's Hospital	1	......
St. Joseph's Hospital	.....	2
University of Maryland	158	126
Totals	770	820

Total Number of Dead Bodies Handled by Health Department

	1912.	1913.
Buried in Potter's Field	72	55
Surrendered to friends for burial	12	18
Transferred to Anatomy Board	758	802
Totals	842	875

The following were goods destroyed and sterilized:

	Destroyed.		Sterlized.	
	1912.	1913.	1912.	1913.
Blankets	56	32	179	350
Bolsters	58	59	227	384
Bed quilts	21	29	24	68
Books	.....	5	3	......
Carpets	23	25	13	11
Comforts	119	105	139	291
Couches	23	25	1	8
Clothing (bundles of)	102	74	29	66
Cushions	24	4	41	78
Curtains	7	2	7	11
Feather beds	35	23	134	190
Mattresses	447	522	179	296
Pillows	300	225	870	1,616
Portieres	1	5	16	31
Rugs	19	10	24	77
Rolls of matting	83	109	4	5
Sheets	16	14	7	11
Spreads	12	6	19	13
Totals	1,346	1,274	1,916	3,470

Number of smallpox patients and suspects sent to Quarantine Hospital by this division.

	Male.		Female.		White.		Colored.	
	1912.	1913.	1912.	1913.	1912.	1913.	1912.	1913.
Smallpox	11	29	4	13	....	2	15	40
Quarantined	33	49	40	61	....	....	73	110

Respectfully submitted,

William E. Woodall, of W.,
Superintendent of Fumigation and Burial of Pauper Dead.

Report of Superintendent of City Morgue.

BALTIMORE, January 1, 1914.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

The following is a report for the year 1913 of the City Morgue:

	1912.	1913.
Number of bodies received	379	380
White	219	230
Black	160	150
Male	307	310
Female	72	70
Ages—		
From 1 to 10 years	48	42
From 11 to 20 years	32	45
From 21 to 30 years	63	58
From 31 to 40 years	62	88
From 41 to 50 years	91	79
From 51 to 60 years	55	34
From 61 to 70 years	28	24

Causes of Death.

	1912.	1913.
Accident	48	63
Alcoholism	14	9
Apoplexy	22	20
Bright's disease	13	3
Burns	1	4
Childbirth	2	....
Congestion of lungs	2	1
Drowned	44	64
Exhaustion	1	....
Exposure	8	1
Fractured skull	1	3
Heart disease	65	68
Heart failure	1	....
Hemorrhage	8	6
Homicide	15	35
Meningitis	3	1
Nephritis	...	4
Peritonitis	3	2
Pellagra	1	....
Pneumonia	14	14
Still birth	18	23
Suicide	21	26
Toxemia	8	11
Tuberculosis	41	11
Typhoid fever	1	2
Uremia	6	7
Unknown	13	2

	1912.	1913.
Bodies buried by friends	235	255
Bodies buried by city	144	126
Bodies now at Morgue	9	5
Post-mortems held by Dr. N. G. Keirle	82	78
Incinerating plant, working days	235	263
Sterilizing plant, working days	210	240

Respectfully submitted,

AUGUST H. RITTMILLER,
Superintendent of City Morgue.

Report of Inspector of Plumbing.

BALTIMORE, May 13, 1914.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

I herewith submit the annual report of the work executed by the Division of Plumbing and Drainage for the fiscal year ending December 31, 1913.

Permits Issued.

MONTHS.	Interior.	Alley.	Sanitary Sewers.	Totals.
January	179	37	1,901	2,117
February	146	23	1,640	1,809
March	215	22	2,208	2,445
April	243	33	2,106	2,382
May	240	27	2,259	2,526
June	211	31	2,061	2,303
July	246	30	1,217	1,493
August	231	16	1,209	1,456
September	391	18	1,188	1,597
October	333	25	1,310	1,668
November	250	25	832	1,107
December	237	27	1,512	1,776
Totals	2,922	314	19,443	22,679

Plumbing Inspections Made by Inspectors.

MONTHS.	Odend'hal.	Truelove.	Smith.	Gessler.	Dorsey.	Reed.	Sullivan.	Martin.	Kneise.	Curran.	Pruitt.	Hagan.	Forster.	Totals.
January	114	.....	315	266	220	282	309	357	286	410	254	222	108	3,143
February	187	.....	234	244	270	279	305	371	285	351	217	246	284	3,273
March	291	.....	341	315	467	305	375	425	357	431	233	299	314	4,153
April	221	.....	196	351	469	240	292	325	282	284	219	252	280	3,411
May	226	.....	123	432	562	304	365	416	266	377	339	276	353	4,039
June	.....	60	236	387	358	232	249	458	252	331	208	144	221	3,136
July	.....	269	168	195	339	149	256	303	131	380	198	208	259	2,855
August	.....	780	262	295	292	246	316	446	256	324	382	276	272	4,147
September	.....	530	173	306	263	303	330	404	259	389	279	364	212	3,842
October	.....	542	271	350	265	189	332	490	282	429	376	431	317	4,274
November	.....	549	152	400	336	382	394	504	229	607	498	486	501	5,038
December	.....	480	222	381	314	361	420	440	220	322	458	469	405	4,501
Totals	1,039	3,210	2,693	3,922	4,155	3,272	3,952	4,939	3,105	4,635	3,661	3,673	3,556	45,812

Sanitory and Drain Inspections.

Months.	Gorman.		Ebberts.		Griffith.		Totals.	
	Sanitary.	Drain.	Sanitary.	Drain.	Sanitary.	Drain.	Sanitary.	Drain.
January	329	68	97	10	200	7	626	85
February	257	83	151	36	219	12	627	131
March	266	126	312	32	385	35	963	193
April	207	203	174	36	252	28	633	267
May	367	146	177	48	145	30	689	224
June	366	76	128	19	120	24	614	119
July	120	53	186	15	322	36	628	104
August	272	30	228	19	247	21	747	70
September	210	18	236	13	251	17	697	48
October	234	20	242	13	252	35	728	68
November	375	83	288	25	290	12	953	120
December	243	95	243	32	93	7	579	134
Total	3,246	1,001	2,462	298	2,776	264	8,484	1,563

Notices to Abate Nuisances, Etc.

MONTHS.	Notices to Abate Nuisances.	Approvals for City Engineer's Office.	Application of Drainage for Inspector of Buildings Office.	Permissions to Enter Sewers, Minor Privileges.
January....................	66	41	53	74
February..................	92	36	54	72
March.....................	41	34	71	91
April.......................	53	32	79	136
May........................	79	48	79	210
June.......................	132	28	75	147
July........................	79	25	52	120
August....................	39	16	77	131
September................	56	13	81	121
October...................	134	2	67	86
November.................	103	7	63	110
December.................	102	17	53	47
Total...............	976	299	804	1,345

Sanitary Sewers.

Permits issued, 1911 and 1912	14,291	
Permits issued, 1913	19,443	
Permits issued to date		33,734
Connections, 1911 and 1912	10,039	
Connections, 1913	16,536	
Connections to date		26,575
Under construction		7,159

Number of Plumbing Fixtures Connected to City Sanitary Sewers.

Water closets	27,707
Wash bowls	13,181
Bath tubs	13,913
Sinks	25,305
Wash trays	1,135
Urinals	650
Slop hoppers	307
Miscellaneous	958
Total	83,156

Abandoned.

Drop privies	10,457
Wells	4,629
Old sewer connections	3,757
Total	18,843

Non-Compliance With Notices Served, Etc.

	"Summons to Show Cause" for Non-compliance With Notices Served.	Warrants.	Convictions.	Fines, etc.
City sanitary sewers	126	2	2	(1) $10 00 (2) 20 00
Cleaning and filling well or drop-privy	10	2	2	(1) 5 00 (2) 20 00
Plumbing, "no permit"	....	1	1	10 00
	136	5	5	$65 00

Number of sanitary sewer connections choked or defective, 149.

Respectfully,

CHARLES I. PUTTS, JR.,
Inspector of Plumbing.

Report of Registrar's Clerk.

BALTIMORE, December 31, 1913.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

I respectfully submit my annual report of all transcripts issued from January 1, 1913, to date, with statement of purposes for which they were required, amounts received, and paid the City Comptroller each month since the collections have been made at this office, during this year, instead of being paid direct to the City Comptroller, as prior to 1913, together with report of other matters in any charges.

TRANSCRIPTS ISSUED.	1912.	1913.
Births	424	1,408
Deaths	1,777	2,028
Totals	2,201	3,436
AMOUNTS.		
January	$85 50	$145 50
February	112 50	142 50
March	88 50	131 60
April	82 00	105 00
May	73 50	101 50
June	135 50	107 50
July	106 50	88 50
August	83 10	99 50
September	83 50	111 00
October	86 00	97 50
November	86 50	88 60
December	103 50	105 00
Totals	$1,126 60	$1,323 70

PURPOSES.	1912.	1913.
Burials	26	4
Employment	327	1,188
Foreign	90	93
Information	14	13
Insurance	1,361	1,587
Legal	173	275
Pensions	156	206
Records	24	28
Schools	30	42
Totals	2,201	3,436

In addition to these tables I herewith hand you this additional one comparing the applications of births issued and applied for during the years 1912 and 1913 which under Ordinance No. 246 authorizes the free issue of transcripts of births for children who wish to work, that will show the great increase of applications in 1913 over 1912 and also the loss in revenue to the city.

Births, 1912.

MONTHS.	Births.	Amounts.	No. Records.	Free.	Searches.
January	39	$7 00	......	......	......
February	10	5 50	......	......	......
March	10	5 00	......	......	......
April	14	7 50	......	......	......
May	8	4 50	......	......	......
June	125	63 00	239	......	365
July	70	35 50	77	......	147
August	35	17 60	29	......	64
September	47	24 00	24	......	71
October	23	12 50	......	......	23
November	18	11 00	......	......	18
December	51	26 00	......	......	51
Totals	424	$219 10	369	......	739

Births, 1913.

MONTHS.	Births.	Amounts.	No. Records.	Free.	Searches.
January	139	$70 00	198	......	487
February	111	56 00	127	......	411
March	64	32 50	71	......	332
April	92	13 50	104	66	375
May	106	15 00	161	79	437
June	206	19 50	283	167	664
July	133	4 00	181	125	479
August	125	18 00	122	94	409
September	133	30 50	116	80	410
October	105	14 50	104	76	375
November	92	18 00	117	59	348
December	102	7 50	107	87	401
Totals	1,408	$299 00	1,691	833	5,128

This table shows that there were only 424 birth transcripts issued in 1912 and 1,408 in 1913. Besides there were 1,691 applications of which there were no records, while in 1912 there were only 369. The searches .in 1912 were only 739, while in 1913, under free law, there were 5,128. The loss on those issued amount to $418, and the loss from no record, viz.: 1,691, "Failure of Doctors and Midwives to Report," would have been $845.50 more, or a total of $1,263.50, which is within $60.20 of the entire receipts of the year, viz.: $1,323.70, for all deaths, transcripts and paid births. Except for this law and the no records the receipts of this desk would have been $2,587.20.

It would appear to me proper that all persons who are to be pecuniarily benefited by the possession of transcripts of their births should certainly be able to pay for them, since they are thus enabled to earn wages or salaries through their possession. The State Health Department charge for all transcripts issued, no matter for what purpose. •

While many we are issuing free, at present, are to the children of persons residing outside our city limits to enable their children to work here while their parents pay taxes to the State.

In December, 1912, there were 51 birth transcripts issued that paid the city $26. *None were free.* In the current month (1913) there were 102 issued and only 15 *were paid for* ($7.50), while the balance, 87 free, created a loss of $43.50, not including the 107 no-records, which would swell the loss for the one month to $97. At least one-half of the birth transcripts issued *free* were from one to two hours evening work, selling papers only, and most of the applicants stated they needed them because they "wanted a badge." If it had not have been for the children born here and living elsewhere, requesting records of their birth for school, employment, foreign, legal and other purposes required by the laws of the States or cities where they at present reside, and the new order of the United States Navy Department demanding the certificates of sailors, marines and others connected with the navy to establish the fact of their nationality in order to receive extra pay, we would have been without any revenue from births whatever since last April. The letters I have had to write in reference to these out-of-town applications will exceed 1,500.

The total number of transcripts issued in 1905, births and deaths, were 1,190, receipts $600.50. In 1900 1,723, receipts $875; in 1912 2,201, receipts $1,126.10, and in 1913 3,436, receipts $1,323.70. Since January 1, 1913, all payments have been paid direct to me and I had to settle the same with the City Comptroller; prior to this year transcripts were not issued until they were endorsed "paid" by the City Comptroller before I filled them out. This year the Comptroller has been relieved of making 3,436 entries in his books, as heretofore, a great saving of books and labor to his department, but a very great addition to my work.

I have thus entered into these details in order that you may fully understand that we may look for double work the coming year (1914) if the present law stands, since I am satisfied that a great advantage will be taken of the city if this free issue continues. The children know about it and inform each other that all they have to do is to go to the State Board of Statistics and get a yellow card, and it will not cost them anything, and it appears that all who apply for these cards get them.

Again, a matter to be taken into consideration is the cost to the city for each of these transcripts when the expenses of these transcripts are looked into. This expense includes the original certificates issued in book form with stubs for physicians and midwives, the indexing and indexes of same, the blanks needed for the applications and transcripts, the book of record, the salaries of the index clerk, and the registrar's clerk, the binding and labelling of the certificates, in addition of the cost of the vault to protect these records, etc. It is very possible, when the other costs of stationery and postage added, it will be seen that each of these transcripts cost the city fully what the law originally required them to cost, if not twice as much, and this loss will increase yearly as the city grows.

I would suggest, in conclusion, that the birth certificates hereafter be printed upon pink paper instead of white, since all the applications and transcript blanks of same are thus printed and volumes filing them bound in red, thus they will not only be uniform, but also easier to distinguish from the deaths.

Respectfully submitted,

GEORGE C. WEDDERBURN,
Registrar's Clerk.

Report of Complaint Clerk.

BALTIMORE, December 31, 1913.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

I respectfully submit herewith report of work done through the office of Complaint Clerk for the year ending December 31, 1913.

You will note there are two tables, one showing the total number of personal complaints, the other giving a list of those abated with the assistance of the Plumbing Division.

In addition to these two tables there were received from the various police districts 5,340 reports containing 28,856 complaints of nuisances, from which, and including the personal complaints, there were sent out from this office by the health wardens 34,995 notices.

Personal Complaints.

WARDS.	Overflowing Privies.	Alleys Requiring Attention.	Water in Cellars.	Defective Drainage.	Inspection of Yards.	Defective Wells.	Inspection of Toilets.	Inspection of Cellars.	Choked Sewers.	Insufficient Toilets.	Unsanitary Conditions.	Inspection of Workshops.	Totals.
First	18	6	19	11	7	.....	7	1	5	......	20	......	94
Second	18	5	16	12	17	.....	7	2	7	......	37	......	121
Third	42	12	37	11	23	.....	23	6	19	1	61	9	244
Fourth	41	26	82	12	20	.....	24	1	48	30	80	24	388
Fifth	62	32	38	21	34	2	45	7	16	12	56	36	361
Sixth	50	20	44	10	24	1	28	7	25	3	43	5	260
Seventh	25	21	54	17	15	.....	14	7	11	2	43	1	210
Eighth	82	26	51	8	19	.....	21	11	15	2	36	......	271
Ninth	37	15	27	28	10	3	15	4	12	1	53	......	205
Tenth	53	23	33	10	31	.....	22	8	16	1	27	1	225
Eleventh	46	33	29	9	30	3	21	3	7	3	56	......	240
Twelfth	37	30	27	24	27	4	12	2	12	......	36	......	211
Thirteenth	37	26	23	25	18	1	20	4	9	......	36	......	199
Fourteenth	65	33	18	16	31	2	31	3	32	2	41	......	274
Fifteenth	73	35	46	37	36	3	17	3	17	......	81	......	348
Sixteenth	90	34	8	13	15	3	19	12	9	......	25	......	228
Seventeenth	55	10	19	4	17	.....	18	4	......	......	22	1	150
Eighteenth	44	17	10	3	15	.....	15	1	17	1	17	......	140
Nineteenth	68	24	11	10	12	1	9	6	1	......	26	......	168
Twentieth	40	40	18	18	12	3	5	9	7	......	37	......	189
Twenty-first	27	13	7	8	10	.....	8	2	......	1	11	......	87
Twenty-second	20	6	26	3	24	1	14	4	27	......	21	2	148
Twenty-third	42	21	20	9	9	.....	3	3	1	......	26	1	135
Twenty-fourth	39	19	17	6	8	.....	8	2	1	......	24	......	124
Totals	1,111	527	680	325	464	27	406	112	314	59	915	80	5,020

Referred to Plumbing Division.

WARDS.	Overflowing Privies.	Alleys Requiring Attention.	Water in Cellars.	Defective Drainage.	Water in Yards.	Defective Wells.	Inspection of Toilets.	Inspection of Cellars.	Choked Sewers.	Water in Manholes.	S'w'ge Backing Into Cellars.	Unsanitary Conditions.	Total.
First.............	1	1	8	...	1	...	...	...	5	...	3	...	19
Second............	...	...	10	...	1	...	...	...	3	...	...	...	14
Third.............	2	...	22	2	1	...	1	...	18	1	...	2	49
Fourth............	1	...	50	6	1	...	...	...	33	14	5	8	118
Fifth.............	...	...	15	4	...	...	...	...	14	...	...	4	37
Sixth.............	4	...	19	...	1	...	5	...	19	3	...	...	51
Seventh..........	...	...	24	3	2	...	...	...	8	...	...	4	41
Eighth............	5	...	28	...	...	...	...	1	14	...	...	1	49
Ninth.............	1	...	17	2	...	1	...	...	11	...	...	3	35
Tenth.............	...	...	24	...	...	...	...	...	16	...	...	7	47
Eleventh..........	1	...	11	3	...	1	...	...	8	8	...	...	32
Twelfth...........	1	...	12	1	...	2	2	...	6	...	3	2	29
Thirteenth.......	1	1	8	3	...	...	2	...	9	...	2	2	28
Fourteenth........	7	1	6	...	...	...	2	...	27	...	3	3	49
Fifteenth.........	...	1	22	6	...	...	...	...	11	...	1	2	43
Sixteenth.........	2	...	3	3	...	...	...	...	6	...	...	2	16
Seventeenth.......	3	...	15	1	...	...	...	...	1	1	...	...	21
Eighteenth........	1	...	4	...	...	...	...	...	16	...	...	2	23
Nineteenth........	4	...	4	...	...	...	1	...	1	...	...	...	10
Twentieth.........	1	...	5	2	...	1	...	...	3	...	1	2	15
Twenty-first......	...	...	2	...	1	...	...	...	....	...	...	...	3
Twenty-second...	1	...	16	...	...	...	...	...	24	2	...	4	47
Twenty-third.....	...	...	8	...	...	...	...	...	1	2	...	...	11
Twenty-fourth...	1	...	6	...	...	...	...	...	....	1	...	...	8
Totals.........	37	4	339	36	8	5	13	1	254	32	18	48	795

To classify all complaints received in this office under their respective headings would require a space entirely too large to have same arranged properly in book form. I have, therefore, given those of most frequent occurrence, while others, which are made up of various and trifling causes are placed under the heading of "Unsanitary Conditions."

You will note these figures in the aggregate compare closely with those for the year 1912. The connection of numerous dwellings in the city with the new sanitary sewers during the year 1913 should naturally improve conditions considerably as far as overflowing privies, defective drainage, water in cellars and yards, etc., are concerned, but at the same time it can be seen that the new system will, for some time at least, require considerable attention of this Department in the abatement of nuisances, such as choked sewers and other conditions in consequence of same.

Respectfully submitted,

T. WARFIELD BURGESS,
Complaint Clerk.

Report of Commissioner's Clerk.

BALTIMORE, December 31, 1913.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

As Commissioner's Clerk, I hereby respectfully submit a report of the work done by me for the year ending December 31, 1913:

No. of letters sent out by the Bacteriological Laboratory........	12,775
No. of lètters sent out by the Food and Dairy Division..........	8,120
No. of notices sent to undertakers..............................	550
No. of semi-weekly reports sent to public schools...............	193,200
No. of semi-weekly reports sent to parochial schools............	82,541
No. of letters sent to factories................................	360
No. of monthly reports sent out.................................	21,600
Total...	319,146

In addition to the above my work has consisted of delivering in person all necessary supplies for the use of the medical inspectors and nurses of the public and parochial schools; the sending out and filing of the daily and complete reports of the five medical inspectors and nurses of schools, delivering the lists of the unvaccinated children to the health wardens, and receiving and filling their reports on same.

My work has also consisted of the setting up in print on the multigraph, circular letters and forms for the various departments; setting up, counting and sending out and folding of the semi-weekly reports to the schools of the infectious diseases.

In addition I have charge of the outgoing mail, keep a monthly account of the stamps used by the various departments, and turn a monthly statement of the same into the secretary each month.

I assisted Dr. C. Hampson Jones from time to time as I was needed.

Respectfully submitted,

C. V. DENNIS,
Commissioner's Clerk.

Report of Burial Permit Clerks.

BALTIMORE, January 1, 1914.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

We hereby respectfully submit the report of the work done by the burial permit clerks for the year ending December 31, 1913.

The following table exhibits a summary of the various kinds of permits issued during the year:

MONTHS.	Burial Permits, City.	Burial Permits, Transit.	Burial Permits, Still Births.	Burial Permits, Shipping.	Burial Permits, Shipping Dup't.	Burial Permits, Disinter.	Removal Permits.	Total
January	935	123	75	117	117	13	463	1,843
February	914	114	86	128	128	16	453	1,839
March	983	129	71	132	132	28	495	1,970
April	890	130	77	115	115	51	484	1,862
May	969	114	71	135	135	55	435	1,914
June	883	107	68	117	117	23	441	1,756
July	1,021	132	72	135	135	6	491	1,992
August	865	128	64	119	119	7	431	1,733
September	766	116	72	124	124	44	344	1,590
October	790	118	65	116	116	52	340	1,597
November	775	105	85	111	111	41	332	1,560
December	926	125	87	134	134	27	438	1,871
Totals	10,717	1,441	893	1,483	1,483	363	5,147	21,527

During the year there were received from cemeteries and transportation companies 14,897 burial disinterment and shipping permits, which have been placed in numerical order and the same have been filed for reference.

Respectfully submitted,

HARRY C. ANDREWS,
ROBERT R. KRAUTER,
Burial Permit Clerks.

Report of Nuisance Clerk.

BALTIMORE, May 13, 1914.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

The following is the report of the work done in the Nuisance Department for the year ending December 31, 1913:

MONTHS.	Permits Issued.	No. of Loads to Winan's Dump.
January	864	785
February	692	709
March	1,167	1,209
April	2.598	2,658
May	2,058	2,104
June	1,773	1,794
July	1,299	1,329
August	1,052	1,116
September	890	935
October	873	927
November	676	749
December	706	722
Total	14,648	15,037

Respectfully submitted,

EDWARD H. THOMPSON,
Nuisance Clerk.

Report of Index Clerk.

BALTIMORE, January 1, 1914.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

I beg to submit the following report of work performed by me during the year ending December 31, 1913:

Number of deaths indexed	10,717
Number of births indexed	12,542
Number of still births indexed	893

I have also written a complete typewritten list (in duplicate) of all deaths and births that occurred during the year 1912 (which is used by the printer for the printing and binding of same) which were as follows:

Number of deaths	10,441
Number of births	11,398

Respectfully submitted,

MAURICE W. JOINT,
Index Clerk.

Report of Clerk to Bureau of Vital Statistics.

BALTIMORE, December 31, 1913.

NATHAN R. GORTER, M. D.,
Commissioner of Health.

DEAR SIR:

I hereby respectfully submit for your consideration the report of the division over which I have supervision.

As has been the custom, all cases of infectious diseases reported have been recorded and placed on file by card index; report cards of health wardens of all cases also on file for reference. Cards of physicians reporting contagious diseases to this department have been filed in their respective wards. Maps of the various diseases have been gotten out from time to time showing the location of cases of contagious diseases reported.

Below will be found the number of cases reported from January 1, 1913, to December 31, 1913:

	1913.	1912.
Smallpox	50	15
Diphtheria	1,309	1,039
Scarlet fever	1,138	750
Typhoid fever	1,163	1,083
Measles	5,724	624
Mumps	161	53
Whooping cough	290	408
Varicella	595	488
Tuberculosis pulmonalis	1,541	2,248
Poliomyelitis	2	25

There has been kept a complete record of all midwives registered during the year, and transcripts sent to the State Board of Health; also a record of licenses for the purpose of boarding babies after application to this department for same having been made and inspections having been made and reported on by the health wardens in each ward where the applicant resided.

Respectfully submitted,

CHARLES W. BUSICK,
Clerk to Bureau of Vital Statistics.

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COMPLIMENTS OF

CLARENCE E. STUBBS

INSPECTOR OF BUILDINGS

ANNUAL REPORT

OF THE

INSPECTOR OF BUILDINGS

TO THE

Mayor and City Council of Baltimore

FOR THE

FISCAL YEAR ENDING DECEMBER 31, 1913

1797

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER

1914

DEPARTMENT OF BUILDINGS

PERSONNEL

CLARENCE E. STUBBS	Inspector of Buildings
James J. Byrne	Assistant Inspector of Buildings
A. W. Cooper	Secretary
B. G. Hawks	District Inspector
Joseph R. Degenhardt	District Inspector
Howard L. Hutchinson	District Inspector
John W. Ringrose	District Inspector
William H. Schulz	District Inspector
Arthur L. Brown	District Inspector
P. D. Copeland	District Inspector
John L. Wartman	District Inspector
Robert J. Collins	District Inspector
William H. Wells	District Inspector
Lawrence Kuszmaul	District Inspector
James P. Wall	District Inspector
Charles S. Schafer	Supervisor of City Improvements
Charles J. Byrne	Assistant Supervisor of City Improvements
Thomas McCreer	Assistant Supervisor of City Improvements
John J. Purcell	Examiner
Lawrence Schoenlin, Jr.	Draftsman
George S. Hughes	Examiner
Charles H. Osborne	Engineer—Steel and Concrete
D. D. Sheesley	Inspector—Steel and Concrete
John J. Roddy	Counter Clerk
William H. Boone	Counter Clerk
Frank Lewis	Notice Clerk
William F. Edwards	Building Permit Clerk
*William J. Hickey	Building Permit Clerk
James McDonnell	Building Permit Clerk
Thomas C. Disney	Building Permit Clerk
John J. McGrath	Record and File Clerk
Ignatus Burns	Furnace Inspector
A. B. Thompson	Clerk—Furnace Inspector
John J. Ward	Steam Plant Inspector
William G. Reilly	Clerk—Steam Plant Inspector
L. L. Kingsbury	Electric Inspector
Joseph N. Shew	Electric Inspector
Charles H. Gantz	Electric Inspector
James F. O'Mailey	Clerk—Electric Work
John L. Hasson	Clerk—Electric Work
C. P. Brown	Elevator Inspector
Charles Hammond	Elevator Inspector
William H. W. Reed	Gasoline Inspector
W. E. Hebler	Fire Gong Inspector
J. F. Voglein	Clerk and Stenographer
P. A. Sullivan	Gas Pipe Inspector
Albert Share	Gas Pipe Inspector
E. A. Thompson	Smoke Inspector

---

*Deceased.

REPORT

Department of Public Safety—Improvements,
Sub-Department Office Inspector of Buildings,
City Hall,

Baltimore, December 31, 1913.

To the Honorable the Mayor
and City Council of Baltimore.

Gentlemen: I herewith submit summary and tables of work done under the supervision of this office for the year ending December 31, 1913.

This Department in 1913 issued 41,324 permits for the erection of new buildings, additions, alterations and repairs, installing gas fitting, heating apparatus, electric appliances, elevators, fire alarm gongs, etc., aggregating $16,004,639.80, as compared with 53,075 permits issued in 1912, aggregating $14,479,373.90.

The following is a statement of contract work awarded by Board of Awards during 1913:

No. 83 School, 50 per cent. finished.

Shed, Ridgely Street Stable, finished.

Pratt Street Stable, mezzanine floor, completed.

Plumbing and drainage, Court House, completed.

Engines, turbines, Polytechnic Institute, 90 per cent. completed.

Additional mechanical equipment, Polytechnic Institute, 90 per cent. completed.

Municipal Garage, completed.

Cow barn, Bay View, 90 per cent. completed.

Fire protection, Bay View, 80 per cent. completed.

Recreation Pier, 30 per cent. completed.

Fixtures, Nos. 6, 22, 27 and 99 Schools, and Polytechnic Institute, completed.

Domestic science room, Eastern High School, completed.

Superintendent's home, Sydenham, 95 per cent. completed.

The following work has been started:

Installing cabinet, City Hall rotunda.

Grading, No. 51 and No. 59 schools.

Grading grounds, Polytechnic Institute.

Seventy-six sewer connections were made to various city buildings, including Court House, markets, schoolhouses, engine-houses, truckhouses, city stables, etc.

There was an aggregate of about 15,000 horsepower installed, which included electric motors, boilers, gas and gasoline engines, etc., in 1913.

Application was made to utilize buildings limited as to location in 66 instances.

Under the building code there is a right of appeal from the decision of the Inspector of Buildings from any decision he may give pertaining to building construction. I am gratified to report that there has been no appeal from any of my decisions. This speaks well for the harmonious conditions existing between the builders and the city.

Inspections are being made constantly on fire-escapes, moving-picture parlors, theatres, places of public assemblage, factories, sweat-shops, and virtually all buildings where people are employed or where they assemble, so as to safeguard them.

City Property.

There are 30 engine-houses, 14 truckhouses and one high pressure fire line station. The majority of the houses are in fair condition.

MARKETS.

There are nine markets:

Belair Market is in good condition.

Broadway Market is in good condition.

Centre Market is in good condition.

Hanover Market is in fair condition.

Hollins Market is in fair condition.

Lexington Market—Much money is spent on this market yearly; same is in very good condition.

Lafayette Market is in good condition.

Northeast Market is in need of reconstruction; appropriation was requested from Board of Estimates relative to same, but the Board declined to appropriate same, on account of the revenue derived from stall-owners not warranting the expenditure.

Richmond Market—This market is being enclosed in glass, in accord with the wishes of the tenants; same is in good condition.

POLICE STATIONS.

There are nine police stations. The condition of these houses is fair—the majority need painting.

STREET CLEANING DEPARTMENT.

The condition of the majority of these stables is very good, with few exceptions. Repairs are being made as my appropriation permits.

CITY HALL.

The corridors of the City Hall are in need of painting. I have been unable to do this on account of appropriation not being allowed.

CITY HALL ANNEX NO. 1.

This building is occupied by the Health Department and office of Bay View Asylum. Same is a rented building. The conditions could be improved, but it is not deemed advisable to do so on account of improvements contemplated to take care of Health Department at the Old Polytechnic Institute on Courtland street.

CITY HALL ANNEX NO. 2.

This property is located on Guilford avenue and is occupied by the Street Cleaning Department, Electrical Commission, Topographical Survey Commission, and Free Public Bath Commission. Same is in fair condition.

COURT HOUSE.

This building is in good condition.

PEOPLE'S COURT.

Quarters are occupied by the People's Court in New Produce Market, and same are in good condition.

QUARANTINE.

The Quarantine quarters are utilized by the Health Department and are in very good condition.

CITY MORGUE.

These premises are utilized by the Health Department and are in very good condition.

CITY GARAGE.

Same is located in basement of Old Polytechnic Institute, and is in good condition.

Bay View Asylum.

The fire-proofing of main building is about completed and will relieve anxiety as to fire hazard. Ward Building "A" is in good condition. The new power-house is in first-class condition. The service building is a new building. Sydenham Hospital is in fair conditon. New cow and feed barn is about completed, also home for superintendent at Sydenham.

City Jail.

The conditions at the Jail are very good. Warden Lee's course in utilizing the prisoners to make repairs, painting, etc., has saved the city considerable money.

Heating City Hall and Court House.

The pipe line connecting Court House and City Hall with High Pressure Pipe Line Station has been in operation about a year and has been working satisfactorily.

Schools.

The general condition of the majority of the schools is very good; a great many of them require painting, both interior and exterior, and this is being done as rapidly as appropriations permit.

School No. 27, School No. 22, School No. 6, and the Polytechnic Institute, all new buildings, were completed and occupied during the year 1913. They have relieved congestion in their respective localities and have also eliminated the necessity of housing children in rented property. The new schools are up-to-date in every particular, having every modern convenience.

Moving Picture Parlors.

Through an understanding with Mr. Daniel J. Loden, Collector of Water Rents and Licenses, permits or licenses were withheld from moving picture parlor applicants until all conditions relative to exits, etc., were satisfactory to this Department. Inspectors are continually inspecting the above so as to prevent accidents. Every safeguard has been taken to protect the public as far as possible.

Fire Escapes.

Inspections are being made daily by this Department as to fire escapes. In a great number of cases my inspectors have found exits blocked by work benches, etc., and these conditions are rectified immediately. The Fire Department and this Department are working in perfect accord to relieve dangerous conditions wherever existing.

Respectfully submitted,

Clarence E. Stubbs,
Inspector of Buildings.

SUMMARY AND TABLES

STATEMENT OF APPROPRIATIONS AND DISBURSEMENTS ABOUT THE OLD CITY PROPERTY.

Repairs to city property, consolidated	$161,700 00	Schools	$78,726 69
Livery and transportation	1,800 00	Engine houses	11,325 53
Incidentals	400 00	Truck houses	6,212 87
Emptying cesspools	330 85	Markets	6,293 94
Refund Hill & Johns	11 00	Police stations	7,784 42
Refund Sewerage Commission, No. 81 School	6 02	Street Cleaning Department	12,068 90
From Contingent Fund	3,208 70	Miscellaneous	44,347 07
From Contingent Fund	1,883 70	Livery and transportation	1,711 00
		Incidentals	399 19
		Cesspools	330 85
			$169,200 46
		Balance	89 81
	$169,290 27		$169,290 27

SALARY ACCOUNT FOR 1913.

Appropriation	$60,360 00	One Inspector of Buildings	$4,000 00
		One Assistant Inspector of Buildings	1,595 83
		Twelve district inspectors	14,400 00
		One Secretary	1,700 00
		One Supervisor City Improvements	1,595 83
		Two Assistant Supervisors City Improvements	2,400 00
		Two examiners	2,192 86
		One draftsman	1,200 00
		One engineer	1,795 00
		One Inspector Steel and Concrete	1,500 00
		Thirteen clerks	11,382 51
		One furnace inspector	1,500 00
		One Steam Plant Inspector	1,680 00
		Three electric inspectors	4,480 00
		Two elevator inspectors	2,350 00
		One Gasoline Inspector	1,200 00
		One Fire Gong Inspector	1,200 00
		Two gas pipe inspectors	2,400 00
		One Smoke Inspector	1,500 00
			$60,072 03
		Balance	287 97
	$60,360 00		$60,360 00

NEW IMPROVEMENTS AS PROVIDED FOR IN THE ORDINANCE OF ESTIMATES, ALSO AMOUNTS BROUGHT FORWARD FROM PREVIOUS YEARS.

IMPROVEMENTS.	Appropriation Brought Forward and Amounts Allowed 1913.	Paid Out.	Balance.
Addition No. 6 School...........	$103,871 10	$97,559 69	$6,311 41
Lot and building, No. 59 School..	15,674 29	3,495 90	12,178 39
Building, No. 51 School..........	10,615 81	4,058 00	6,557 81
Lot and building, No. 22 School..	153,559 99	153,559 99	....
Lot & bldg. Polytechnic Institute.	322,316 73	290,512 48	31,804 25
Lot and Building, No. 27 School..	117,622 60	101,544 75	16,077 85
Addition, No. 83 School.........	99,945 42	39,233 61	60,711 81
Addition, No. 99 School.........	56,344 48	56,344 48	....
Lot and building, No. 111 School and Branch and No. 101 School	120,000 00	....	120,000 00
Lot and building, No. 61 School..	75,000 00	....	75,000 00
Addition, No. 67 School........	66,950 00	....	66,950 00
Addition, No. 34 School.........	25,000 00	....	25,000 00
Improved heating and ventilating, No. 75, No. 12 and No. 8 Schools.	5,000 00	5,000 00	....
Lot and building, No. 35 Engine House..............	22,242 32	....	22,242 32
Lot and building, No. 41 Engine House..............	22,802 50	1 30	22,801 20
Home, Supt., Sydenham........	6,095 35	4,177 03	1,918 32
Addition, No. 50 School.........	5,000 00	....	5,000 00
Lot and building, No. 64 Branch School	48,456 03	....	48,456 03
Additional Room and Sanitary Improvement, City Hall.......	3,188 48	2 003 70	1,184 78
Boiler, No. 1 Bath House........	1,181 88	311 00	870 88
Two Public Comfort Stations in Markets......	25,000 00	....	25,000 00
Supplying heat and light from High Pressure Pumping Station to City Hall and Court House..	20,951 01	18,389 21	2,561 80
Municipal Garage...............	4,500 00	4,500 00	....
Contingencies...................	20,000 00	20,000 00	....
	$1,351,317 99	$800,691 14	$550,626 85

STATEMENT SHOWING MONTHLY ADDITIONS, ALTERATIONS AND NEW IMPROVEMENTS FROM JANUARY 1 TO DECEMBER 31, 1913.

Months.	Additions.		Alterations.		New Improvements.
	Number.	Cost.	Number.	Cost.	
January	55	$50,000	609	$65,000	$665,402 00
February	80	74,000	531	58,000	524,234 00
March	140	125,000	716	75,000	726,492 00
April............	160	140,000	815	82,000	715,922 00
May	196	150,000	880	85,000	1,885,621 50
June.......... .	210	152,000	836	83,000	755,585 00
July	246	190,000	720	81,500	428,366 00
August	210	160,000	701	75,000	745,153 00
September	230	165,000	705	75,000	706,933 00
October.........	190	140,000	857	90,000	815,266 00
November	165	125,000	678	75,000	589,358 00
December.......	140	110,000	571	60,000	667,669 00
	2,022	$1,581,000	8,619	$904,500	$9,226,001 50

2,681 new improvements...............	$9,226,001 50	
8,619 alterations......................	904,500 00	
2,022 additions........................	1,581,000 00	
	$11,711,501 50	
Add 20% for undervaluation...........	2,342,300 30	
		$14,053,801 80
16,888 electric inspections............................		786,838 00
3,150 franchises, minor privileges		200,000 00
227 elevators...		200,000 00
2,630 heating apparatus.....		400,000 00
5,031 gas fitting................................		354,000 00
76 alarm gongs		10,000 00
41,324 permits, total for 1913		$16,004,639 80
Total valuation for 1912 was....................		14,479,373 90
Total increase over 1912 was...................		$1,479,373 90

SUMMARY OF BUILDING OPERATIONS IN THE CITY OF BALTIMORE FROM JANUARY 1 TO DECEMBER 31, 1913.

2,362 two-story brick dwellings	$3,543,263 00
107 two-story frame dwellings	447,470 00
37 three-story brick dwellings	249,866 50
1 three-story frame dwelling	20,000 00
11 moving picture parlors	66,200 00
16 garages	116,651 00
1 bank	50,000 00
2 halls	36,017 00
20 apartment houses	360,600 00
1 addition to monastery	20,000 00
2 office buildings	108,000 00
11 churches	244,000 00
2 schools (city)	157,829 00
1 shed (city)	3,240 00
Mezzanine floor Pratt Street Stable	4,094 00
1 hotel	28,000 00
1 field house (city)	6,455 00
1 university	500,000 00
11 stores	152,390 00
1 lodge	40,000 00
3 hospitals	158,000 00
1 Sunday school	6,000 00
1 club	4,500 00
1 recreation and commercial pier	242,768 00
2 private schools	297,500 00
1 library	18,100 00
82 manufacturing and warehouses	2,345,058 00
	$9,226,001 50

AMOUNT APPROPRIATED FOR 1913.

Repairs to city property, consolidated	$161,700 00
Livery and transportation	1,800 00
Incidentals	400 00
Emptying cesspools	300 00
	$164,200 00

NEW IMPROVEMENTS FOR 1913.

No. 22 School	$15,963 39
Polytechnic Institute	264,000 00
No. 99 School	400 00
Improved heating and ventilating (Nos. 75, 12 and 8 Schools)	5,000 00
Home for Superintendent, Sydenham	6,095 35
Addition No. 50 School	5,000 00
Lot and building, No. 64 Branch School	10,000 00
Two public comfort stations in markets	10,000 00
Municipal garage	4,500 00
Contingencies	20,000 00
	$340,958 74

APPLICATIONS AND PERMITS—COMPARATIVE STATEMENT FOR THREE YEARS.

Buildings and Improvements.	1913.		1912.		1911.	
	No.	Value.	No.	Value.	No	Value.
Churches	11	$244,000 00	8	$126,000	9	$260,133
Banks	1	50,000 00	1	20,500	1	5,000
Apartments	20	360,600 00	10	615,000	14	697,842
Office buildings and warehouses	84	2,453,058 00	108	2,261,548	83	2,772,317
Hospitals	3	158,000 00	2	114,000	1	22,000
Theatres			1	25,000	1	100,000
Schools	5	461.329 00	5	426,688	2	464,150
Halls	2	36,017 00				
Engine houses						
Library	1	18,100 00			1	19,000
Armory						
P. O. stations					3	28,780
Lodge	1	40,000 00	1	31,000		
Club house	1	4,500 00	1	50,000		
Stable (city)			1	19,760		
Synagogue			1	8,600		
Bath house (city)			1	35,400		
Stores	11	152,390 00	2	186,775		
Parish house			1	52,000		
Telephone exchange			1	48,000		
Service building			1	51,355		
Art gallery			1	15,000		
Moving picture	11	66,200 00				
Garages	16	116,651 00				
Addition to monastery	1	20,000 00				

Shed	1	3,240 00	....	....	....	....
Mezzanine floor	1	4,094 00	....	....	....	....
Hotel	1	28,000 00	....	....	....	....
Field house	1	6,455 00	....	....	....	....
University	1	500,000 00	....	....	....	....
Recreation pier	1	242,768 00	....	....	....	....
Dwellings	4,529	5,841,599 50	6,221	5,563,699	3,517	5,150,165
Additions	2,022					
Alterations	8,619	904,500 00	....	735,567	....	....
	15,344	$11,711,501 50	6,367	$10,385,892	3,632	$9,519,387

APPLICATIONS AND PERMITS — COMPARATIVE STATEMENT FOR THREE YEARS.

PRIVILEGES.	Number 1913.	Number 1912.	Number 1911.
Franchise privileges	3,150	2,500	2,617
Alterations and repairs	10,641	8,000	8,190
Electric installation	13,013	10,179	9,082
Heating apparatus	2,630	1,479	1,744
Motive power	6,492	10,153	6,087
New elevators	227	157	171
Old elevators repaired	64	56	42
Gas fitting	5,031	2,260	2,266
Fire alarm gong system	76	48	40
	41,324	34,832	30,239

STATEMENT SHOWING CONDEMNATIONS AND NOTICES SENT FOR THE PUBLIC SAFETY.

Condemnations and Notices.	Number 1913.	Number 1912.	Number 1911.
Churches	3	5	....
Business houses	110	6	....
Stores, dwellings and stables	553	477	18
Walls, etc.	183	93	265
Chimneys	157	67	58
Fences, sheds, etc	341	111	19
Improper exits	211	37	704
Repair notices	345	201	407
Violation notices	653	170	51
Elevator notices	169	53	81
Dangerous electric work	61	35	65
Alarm gong systems	81	5	15
Garages	....	7	....
Hotels	9	5	....
Factories	49	37	....
Apartments	53	27	....
Tenements	29	7	....
Halls	13	7	....
Fire escapes	198	25	....
	3,218	1,375	1,683

INSPECTIONS AND EXAMINATIONS.

There were:

227 elevator inspections.
16,888 electric inspections.
80 alarm gong inspections.
5,031 gas pipe inspections.
227 certificates for elevators.
5,514 gas pipe certificates.
5,031 heating apparatus.
76 alarm gong systems.

LIST OF PROPERTY UNDER THE SUPERVISION OF THE INSPECTOR OF BUILDINGS.

City Hall	1
Court House	1
City Hall Annex	2
Administration Building (School Board)	1
Baltimore City College	1
Eastern Female High School	1
Western Female High School	1
Polytechnic	2
Colored High and Training School	1
School Buildings	132
Engine Houses (Fire Department)	41
Truck Houses (Fire Department)	17
Market Houses	11
Public Halls	4
Quarantine Station	1
City Morgue	1
City Yard (enclosure)	1
Potter's Field	1
Bay View	1
High Pressure Pipe Line Station	1
	227

CONTINGENT FUND.

		EXPENDITURES.	
Appropriation 1913	$20,000 00	Typographical Survey, blue prints	$0 29
		No. 99 School	400 00
		Robinson & Johnson, quarantine	710 00
		Singer-Pentz Co., quarantine	940 11
		Werner, paints, glass	459 36
		Colonial Motor Car Co., automobile	1,315 00
		W. G. Cornell Co	7,018 68
		P. T. Barry Co., sewerage and drainage	2,346 01
		Cesspools	30 85
		C. Herbold & Son, (Eastern High School)	1,737 30
		Repairs City Property Consolidated	5,042 40
	$20,000 00		$20,000 00

EMPTYING CESSPOOLS.

Appropriation	$300 00	Parental School	$31 00
Contingent Fund	30 85	No. 27 School	10 00
		No. 108 School	25 00
		No. 115 School	25 00
		No. 118 Branch School	24 50
		No. 91 School	25 00
		No. 22 School	18 00
		No. 108 School	42 50
		No. 2 School	25 00
		No. 66 School	50 00
		No. 43 School	25 00
		No. 9 Engine Company	29 85
	$330 85		$330 85

REPAIRS TO CITY PROPERTY CONSOLIDATED, 1913.

Appropriation		$161,700 00
Refund Hill & Johns		11 00
Refund Sewerage Commission		6 02
Refund from Contingent Fund		3,208 70
Refund from Contingent Fund		1,833 70
		$166,759 42

Expenditures.

Schools	$78,726 69	
Engine houses	11,325 53	
Truck houses	6,212 87	
Markets	6,293 94	
Police stations	7,784 42	
Street Cleaning Department	12,068 90	
Miscellaneous	44,347 07	
		$166,759 42

REPAIRS TO CITY PROPERTY CONSOLIDATED.

Appropriation, 1913	$161,700 00
Refund, Hill & Johns	11,000 00
Refund, Sewerage Commission	6 02
Refund, from Contingent Fund	3,208 70
Refund, from Contingent Fund	1,833 70
	$166,759 42

SCHOOLS.

Administration Building	$1,425 91
Baltimore City College	1,850 26
Eastern High School	579 09
Polytechnic Institute (Courtland street)	419 25
Polytechnic Institute (North avenue)	406 24
Colored High and Training School	593 55
Addition to Colored High and Training School	2,267 00
Western High School	3,530 15
Parental School (Gilmor lane)	227 11
Parental School (Catonsville)	1,536 46
No. 1 School	862 39
No. 2 School	145 35
No. 3 School	1,726 14
No. 4 School	1,664 57
No. 5 School	1,169 37
No. 6 School	73 44
No. 7 School	316 04
No. 8 School	549 55
No. 9 School	288 25
No. 10 School	357 86
No. 11 School	1,143 00
No. 12 School	356 00
No. 13 School	312 88
No. 14 School	319 58
No. 15 School	370 75
No. 16 School	586 31
No. 19 School	474 34
No. 20 School	917 15
No. 21 School	182 85
Amount carried forward	$24,650 84

Amount brought forward	$24,650 84
No. 22 School	329 62
No. 23 School	366 64
No. 24 School	705 03
No. 25 School	607 72
No. 26 School	346 04
No. 27 School	561 69
No. 28 School	229 74
No. 29 School	542 32
No. 30 School	1,287 72
No. 31 School	233 83
No. 32 School	647 27
No. 33 School	230 66
No. 34 School	309 99
No. 35 School	1,537 99
No. 37 School	482 27
No. 38 School	162 59
No. 39 School	347 55
No. 40 School	1,010 18
No. 42 School	318 69
No. 43 School	706 97
No. 44 School	56 93
No. 45 School	413 12
No. 47 School	454 18
No. 48 School	963 96
No. 49 School	856 96
No. 50 School	387 14
No. 50 Branch School	85 00
No. 51 School	564 58
No. 52 School	452 98
No. 53 School	768 33
No. 54 School	283 96
No. 55 School	1,050 98
No. 57 School	547 08
No. 58 School	688 11
No. 58 Branch School	105 39
No. 59 School	647 36
No. 60 School	806 37
No. 60 Branch School	30 00
No. 61 School	383 69
Amount carried forward	$45,161 47

Amount brought forward	$45,161 47
No. 62 School	2,457 13
No. 63 School	326 58
No. 64 School	229 16
No. 65 School	4,310 25
No. 66 School	495 13
No. 67 School	1,142 37
No. 68 School	1,270 55
No. 70 School	691 40
No. 71 School	680 08
No. 72 School	631 65
No. 73 School	376 86
No. 74 School	1,113 10
No. 75 School	908 04
No. 76 School	538 69
No. 77 School	322 36
No. 78 School	1,436 57
No. 79 School	399 52
No. 80 School	606 31
No. 81 School	636 46
No. 82 School	322 92
No. 83 School	655 15
No. 84 School	1,526 12
No. 85 School	601 46
No. 86 School	906 08
No. 91 School	49 98
No. 92 School	147 16
No. 93 School, East and West Branches	592 88
No. 94 School	584 10
No. 95 School	463 23
No. 96 School	254 34
No. 97 School	229 79
No. 98 School	865 09
No. 99 School	1,906 64
No. 100 School	629 38
No. 101 School	191 33
No. 103 School	781 50
No. 105 School	331 12
No. 106 School	751 74
No. 107 School	174 61
Amount carried forward	$75,698 30

Amount brought forward	$75,698 30	
No. 107 Branch School	31 59	
No. 108 School	305 97	
No. 109 School	145 38	
No. 109 Branch School	27 19	
No. 110 School	360 78	
No. 111 School	396 15	
No. 111 Branch School	116 46	
No. 112 School	574 16	
No. 113 School	794 69	
No. 115 School	56 22	
No. 116 School	145 73	
No. 118 School	29 70	
No. 118 Branch School	44 43	
		$78,726 69

ENGINE HOUSES.

No. 1 Engine Company	$246 45
No. 2 Engine Company	274 44
No. 3 Engine Company	278 83
No. 4 Engine Company	141 49
No. 5 Engine Company and No. 3 Truck Co.	469 28
No. 6 Engine Company	386 24
No. 7 Engine Company	230 23
No. 8 Engine Company	15 22
No. 9 Engine Company	353 10
No. 10 Engine Company	318 92
No. 11 Engine Company	262 59
No. 12 Engine Company	112 28
No. 13 Engine Company	800 04
No. 14 Engine Company	142 00
No. 15 Engine Company	652 33
No. 16 Engine Company	262 22
No. 17 Engine Company	135 16
No. 18 Engine Company	265 73
No. 19 Engine Company	516 66
No. 20 Engine Company	650 58
No. 21 Engine Company	765 66
No. 22 Engine Company and No. 17 Truck Co.	451 53
No. 23 Engine Company	171 87
Amount carried forward	$7,902 85

Amount brought forward	$7,902 85	
No. 24 Engine Company	211 37	
No. 25 Engine Company	275 02	
No. 26 Engine Company	349 43	
No. 27 Engine Company	445 22	
No. 28 Engine Company	391 95	
No. 29 Engine Company	172 30	
No. 30 Engine Company	300 93	
No. 31 Engine Company	229 78	
No. 32 Engine Company	18 24	
No. 33 Engine Company	324 77	
No. 34 Engine Company	128 46	
No. 36 Engine Company	151 04	
No. 37 Engine Company	165 88	
No. 38 Engine Company	183 10	
No. 39 Engine Company	75 19	
		$11,325 53

TRUCK HOUSES.

No. 2 Water Tower	$1,009 04	
No. 1 Truck Company	100 50	
No. 2 Truck Company	1,409 88	
No. 4 Truck Company	451 21	
No. 5 Truck Company	246 66	
No. 6 Truck Company	216 86	
No. 10 Truck Company	889 66	
No. 11 Truck Company	1,083 32	
No. 12 Truck Company	183 04	
No. 13 Truck Company	181 05	
No. 14 Truck Company	168 39	
No. 15 Truck Company	108 58	
No. 16 Truck Company	164 68	
		$6,212 87

MARKETS.

Belair Market	$195 72
Broadway Market	498 84
Canton Market	145 00
Centre Market	2,769 33
Amount carried forward	$3,608 89

Amount brought forward	$3,608 89	
Cross Street Market	210 84	
Hanover Market	491 55	
Hollins Market	492 39	
Lafayette Market	53 82	
Lexington Market	413 41	
Northeast Market	790 39	
Richmond Market	232 45	
		$6,293 94

POLICE STATIONS.

Central Police Station	$879 52	
Eastern Police Station	505 69	
Northern Police Station	1,930 75	
Southern Police Station	698 51	
Western Police Station	889 37	
Northeastern Police Station	1,019 58	
Northwestern Police Station	886 62	
Southwestern Police Station	955 26	
Patrol stables	19 12	
		$7,784 42

STREET CLEANING DEPARTMENT.

Fulton Avenue Stable	$1,301 63	
Greenmount Avenue Stables	137 16	
Pratt Street Stable	7,296 84	
Ridgely Street Stable	3,333 27	
		$12,068 90

MISCELLANEOUS.

City Hall	$10,189 02	
City Hall Annex No. 1	413 81	
City Hall Annex No. 2	693 38	
Court House	7,364 24	
City Jail	8,841 21	
Bay View Asylum	10,611 12	
Sydenham Hospital	1,134 17	
Municipal Laboratory	288 08	
Amount carried forward	$39,535 03	

Amount brought forward	$39,535 03	
People's Court	1,883 26	
High Pressure Pumping Station	696 84	
Quarantine	1,208 89	
City Morgue	276 40	
Municipal Garage	570 62	
Construction Division Water Department, Holliday street	36 80	
Old No. 4 Truck House	79 76	
Eastern Pumping Station	1 17	
No. 1006 Sassafras street	25 30	
Nos. 1704-1706 Barclay street	16 50	
No. 1438 Madison street	16 50	
		$44,347 07
		$166,759 42

Annual Report

Department of Legislative Reference

To the MAYOR AND CITY COUNCIL OF
BALTIMORE *for the* FISCAL YEAR
ENDED DECEMBER 31,
1913

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER
1914

REPORT

BALTIMORE, January 2, 1914.

To the Honorable the Mayor and City Council of Baltimore.

GENTLEMEN:

I submit herewith the annual report of the Department of Legislative Reference for the year ending December 31, 1913.

The Department was called upon more frequently for information during the year 1913 than for any previous year of its existence. Information on important subjects, particularly those relating to municipal questions, is continually being collected and indexed, so that as a general rule some information at least can be given on most of the important municipal questions. If the desired information is not on file however, steps are taken at once to secure it. Soon after the November election a letter was sent to each member of the Legislature, calling attention to the work of the Department. This has been the policy pursued by the Department since its establishment in 1907 and the results would certainly seem to justify the advisability of doing this at each session of the Legislature, since there are so many changes in the membership of that body. The following is a copy of the letter which was sent to the members of the present Legislature:

> I am writing to call your attention to the work of this Department and to ask your assistance in making it possible for us to collect and compile information which may be useful during the coming session of the Legislature. I am sending you under separate cover a copy of my last report, which will give you some idea of the kind of work we try to do and of the material already on file. I would appreciate it, however, if you would inform me as soon as convenient of the special

topics in which you are interested and about which you desire information. If it is not already on file, I will try to secure it for you. Your request will be regarded as confidential.

This Department is non-political and non-partisan and if I can be of any service to you do not hesitate to call upon me.

This Department expects to receive during the present session of the Legislature fifteen copies of all bills which are introduced into the Legislature and these will be indexed each day as they are received. A card has been devised for the purpose of showing the progress of the more important bills. Particular attention will be given to the bills which relate to the City of Baltimore. There is a complete file of the bills introduced at the 1908, 1910 and 1912 sessions of the Legislature, for which there is a very full and complete index.

It is not possible to give a complete list of the topics on which information has been given, but among these may be mentioned the following on which information was supplied during the past year:

Fisheries.
Initiative and referendum.
Health—Laws.
City Forester.
Paving—Assessments.
Home rule.
Gas—Rates.
Finance reports of States.
Finance reports of cities.
Child labor—Laws.
Schools—Reports.
Schools—Laws.
Boards of control.
Supply departments.
Tax commissions.
Taxation.
County government.
Employers' liability.
Milk inspection.
Fire prevention.
Maryland statistics.
Blue sky laws.
Coal production.
Municipal markets.
Harbors—Laws.
Port development.
Population.
Juries—Verdict.
Constitutions.
Wheel tax.
Waterworks—Finance.
Street cleaning.
City planning—Laws.
Elevator devices.
Inebriates.
Commission government.
Refuse collection.
Street railways — Government ownership.
Somers' system of assessment.

Minimum wage.
Mothers' pensions.
Factory laws.
Serial bonds.
Dance halls.
Negro segregation.
Jim crow laws.
Tenement house laws.
Sunday observance.
Municipal ice plants.
Banking laws.
Fireworks—Laws.
Maryland towns—Charters.
Public utilities—Extensions.
Excess condemnation.
Explosives—Laws.
Liquor licenses.
Maryland—Minerals.
Budget exhibits.
Moving pictures—Censorship.
Street railways—Taxation.
Salaries and fees.
Consolidation of schools.
Legislative procedure.
Boroughs.
Judges—Salaries.
Probation system.
Mortality statistics.
Social evil.
Cost of living.
Noise—Laws.
Smoke prevention.
Cold storage.
Loan sharks.
Accounting.
Automobiles—Laws.
Boards and commissions.
City deposits.
Schools—Neighborhood use.
Sewers—Laws.
Parcel post.
Public works departments.
Complaints bureaus.
Savings bank insurance.
Vent pipes.

Other cities have recognized the value of departments of this kind, so that at the present time similar departments are in operation in New York, Chicago, Philadelphia, St. Louis, Cincinnati, Milwaukee, Kansas City (Mo.), Minneapolis, Oakland, Portland (Ore.) and Toronto. New York, Chicago, Cincinnati and Portland (Ore.) established their departments during the past year. Other cities are considering the question and the National Municipal League is co-operating in this work, for it recognized that the establishment of such departments promotes mutual co-operation and facility of exchange of information, thereby increasing the efficiency of each department.

The following list, while not exhaustive, will give some idea of the kind of material on file in the Department:

Agricultural co-operative credit associations.
Art commissions.
Assessments—Special.
Automobiles—Municipal.
Apportionment of representation.
Bakeries—Sanitation.
Banks—Co-operative.
Banks—Laws.
Banks—Reports.
Banks—Taxation.
Bar associations.
Baths.
Buildings—Laws.
Billboards.
Bill drafting.
Blind.
Boards and commissions.
Bonds—Serial.
Bonds—Taxation.
Budgets.
Corrupt practices.
Corporations—Laws.
Commission government.
Condemnation of land.
Civil service.
Conservation.
Charter revision.
Charters and ordinances.
Charities.
Cigarettes.
City planning.
Civic associations.
Child labor.
Complaint bureaus.
Cold storage.
Convict labor.
Cost of living.
Counties—Government.
Dance halls.
Dangerous trades.
Depositories —Laws.
Diseases—Industrial.
Divorce.
Dogs—Licenses.
Drinking cups.
Drugs.
Efficiency.
Elections—Laws.
Electric lighting—Rates.
Elevators.
Electric signs.
Electrocution.
Employment bureaus.
Employers' liability.
Excess condemnation.
Explosives.
Express companies.
Franchises.
Financial reports of States.
Financial reports of cities.
Filtration.
Fire departments—Equipment.
Fire protection.
Fish—Laws.
Food—Laws.
Flies.
Forestry.
Factory inspection.
Garages—Municipal.
Garbage—Collection.
Garbage—Disposal.
Grade crossings.
Gas—Rates.
Grain inspection.
Governors' messages.
Home rule.
Housing.

Harbors.
Hours of labor.
Immigration.
Illiteracy.
Income tax.
Inebriety.
Inheritance tax.
Indeterminate sentences.
Industrial education.
Industrial accidents.
Insurance—Investments.
Insurance—Laws.
Insanity.
Irrigation and drainage.
Initiative and referendum.
Juvenile courts.
Juvenile delinquency.
Jury commissioners.
Legislatures—Expenses.
Legislatures—Printing.
Legislative procedure.
Legislative reference work
Licenses.
Laws of States.
Loan sharks.
Lobbying.
Labor—Laws.
Labor—Reports.
Liquor licensing boards.
Liquor problem.
Municipal courts.
Municipal leagues.
Municipal ownership.
Municipal research.
Municipal newspapers.
Municipal lighting—Reports.
Municipal lighting—Rates.
Mayors' messages.
Motion pictures—Censorship.
Mosquitoes.
Meats.
Markets.
Milk.
Mines and mining.
Municipalities—General.
Maryland Legislature.
Negro suffrage.
Negro segregation.
Noise.
Oysters.
Old age pensions.
Open-air schools.
Pensions—Mothers'.
Primary elections.
Paving.
Public comfort stations.
Prisons.
Probation.
Parole.
Police—Uniforms.
Police departments.
Presidential preference primaries.
Plumbing.
Proportional representation.
Public service commissions.
Parks.
Playgrounds.
Parcel post.
Postal savings banks.
Public utilities.
Public health.
Rats.
Railroads—Rates.
Railroads—Regulations.
Railroads—Terminal facilities.
Railroads—Electrification.
Roads.
Recall.
Representation.
Salaries and fees.
Savings banks—Insurance.
Short ballot.
Single tax.
State constitutions.

The following list, while not exhaustive, will give some idea of the kind of material on file in the Department:

Agricultural co-operative credit associations.
Art commissions.
Assessments—Special.
Automobiles—Municipal.
Apportionment of representation.
Bakeries—Sanitation.
Banks—Co-operative.
Banks—Laws.
Banks—Reports.
Banks—Taxation.
Bar associations.
Baths.
Buildings—Laws.
Billboards.
Bill drafting.
Blind.
Boards and commissions.
Bonds—Serial.
Bonds—Taxation.
Budgets.
Corrupt practices.
Corporations—Laws.
Commission government.
Condemnation of land.
Civil service.
Conservation.
Charter revision.
Charters and ordinances.
Charities.
Cigarettes.
City planning.
Civic associations.
Child labor.
Complaint bureaus.
Cold storage.
Convict labor.
Cost of living.
Counties—Government.
Dance halls.
Dangerous trades.
Depositories —Laws.
Diseases—Industrial.
Divorce.
Dogs—Licenses.
Drinking cups.
Drugs.
Efficiency.
Elections—Laws.
Electric lighting—Rates.
Elevators.
Electric signs.
Electrocution.
Employment bureaus.
Employers' liability.
Excess condemnation.
Explosives.
Express companies.
Franchises.
Financial reports of States.
Financial reports of cities.
Filtration.
Fire departments—Equipment.
Fire protection.
Fish—Laws.
Food—Laws.
Flies.
Forestry.
Factory inspection.
Garages—Municipal.
Garbage—Collection.
Garbage—Disposal.
Grade crossings.
Gas—Rates.
Grain inspection.
Governors' messages.
Home rule.
Housing.

Harbors.
Hours of labor.
Immigration.
Illiteracy.
Income tax.
Inebriety.
Inheritance tax.
Indeterminate sentences.
Industrial education.
Industrial accidents.
Insurance—Investments.
Insurance—Laws.
Insanity.
Irrigation and drainage.
Initiative and referendum.
Juvenile courts.
Juvenile delinquency.
Jury commissioners.
Legislatures—Expenses.
Legislatures—Printing.
Legislative procedure.
Legislative reference work
Licenses.
Laws of States.
Loan sharks.
Lobbying.
Labor—Laws.
Labor—Reports.
Liquor licensing boards.
Liquor problem.
Municipal courts.
Municipal leagues.
Municipal ownership.
Municipal research.
Municipal newspapers.
Municipal lighting—Reports.
Municipal lighting—Rates.
Mayors' messages.
Motion pictures—Censorship.
Mosquitoes.
Meats.
Markets.
Milk.
Mines and mining.
Municipalities—General.
Maryland Legislature.
Negro suffrage.
Negro segregation.
Noise.
Oysters.
Old age pensions.
Open-air schools.
Pensions—Mothers'.
Primary elections.
Paving.
Public comfort stations.
Prisons.
Probation.
Parole.
Police—Uniforms.
Police departments.
Presidential preference primaries.
Plumbing.
Proportional representation.
Public service commissions.
Parks.
Playgrounds.
Parcel post.
Postal savings banks.
Public utilities.
Public health.
Rats.
Railroads—Rates.
Railroads—Regulations.
Railroads—Terminal facilities.
Railroads—Electrification.
Roads.
Recall.
Representation.
Salaries and fees.
Savings banks—Insurance.
Short ballot.
Single tax.
State constitutions.

Switching charges.
Street cleaning.
Schools—Compulsory attendance.
Schools—Consolidation.
Schools—Neighborhood use.
Schools—Medical inspection.
Sewerage.
Sewage sludge.
Social evil.
Street railways.
Smoke.
Subways.
Swimming pools.
Tax laws.
Taxation.
Tariff.
Testing laboratories.
Telephones—Rates.
Torren's system.
Traffic.
Trees.
Typhoid fever.
Tuberculosis.
Unemployed.
Uniform accounting.
Vocational education.
Vital statistics.
Wages.
Water supply.
Water rates.
Waterways.
Weapons.
Weights and measures.
Woman suffrage.
Workmen's compensation.

During the past year there were added to our collection two hundred and eighty-two books and fifteen hundred and eighty-two pamphlets, making a total of twenty hundred and twenty-seven books and ninety-six hundred and seventeen pamphlets. In addition to the books and pamphlets, there is quite a collection of magazines, legislative bills of other States, newspaper clippings, duplicate copies of the more important pamphlets and documents, as well as a complete file of the bills for the last three sessions of the Maryland Legislature. During the year quite a number of compilations were made, among which may be mentioned the following:

Vent pipes.
Complaint bureaus.
Anti-noise ordinances.
Legislative procedure.
Excess condemnation.
Taxation of banks.
Extension of public utilities.
Elevator devices.
Departments of public works.
Tax rates of cities.

Over five hundred documents and pamphlets were loaned; but, of course, the greater number of inquiries were answered at once or the information forwarded without the necessity of letting the documents leave the office. Over four thousand communications were sent out from the Department, either asking or giving information.

The total expenditures of the Department for the year 1913 were $3,629.25.

The officials of the city and State have been extremely kind and courteous in furnishing the Department with information, reports, etc., when so requested, and I desire to take this occasion to extend my thanks for the co-operation and assistance which has been extended to the Department by them.

I also desire to take this occasion to commend the industrious and efficient work of my assistants, Misses Ella S. Hitchcock and Nellie W. Mewshaw, who have aided so greatly in increasing the usefulness of the Department.

Respectfully submitted,

HORACE E. FLACK,
Executive.

FIFTY-FOURTH ANNUAL REPORT

OF THE

Board of Park Commissioners

TO THE

Mayor and City Council of Baltimore

FOR THE

FISCAL YEAR ENDING DECEMBER 31, 1913

1797

BALTIMORE
MEYER & THALHEIMER
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1914

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Board of Park Commissioners

OF THE

CITY OF BALTIMORE, MARYLAND

1913

GEORGE WEEMS WILLIAMS, Esq., *President.*
JOHN S. GITTINGS, Esq.
ALFRED E. BOOTH, Esq.
MILTON B. WILLIAMS, Esq.
JAMES T. STUART, Esq.

WILLIAM S. MANNING, *General Superintendent.*
J. V. KELLY, *Secretary-Treasurer.*

Report of the Board of Park Commissioners

BALTIMORE, March 2, 1914.

To the Mayor and City Council of Baltimore.

GENTLEMEN—The Board of Park Commissioners herewith submit their report for the year 1913.

Attached to this report is the report of the General Superintendent containing a general summary of the work done by this Department and also the financial report prepared and submitted by the Secretary and Treasurer of the Board.

During the past year the Board employed Messrs. Haskins & Sells, certified public accountants, to audit the accounts of all the park-tax-paying railways in the city in regard to that tax, and their report has been submitted showing that the city is receiving the full amount due, unless certain questions of law involved in the calculation of the tax and raised by the report should be decided contrary to the views acted on by the United Railways and Electric Company. These questions have been submitted to the City Solicitor for his opinion.

The most important land acquirement during the year was the consummation of the purchase of the Bergner property, negotiated in 1912, at the price of $36,000. This property runs from North avenue near Eleventh street (sometimes called Hilton street) to Gwynn's Falls Park and adjoins the Hilton property, which is situated at the corner of North avenue and Eleventh (or Hilton) street, purchased in 1912. In this connection we might call attention to the exchange of several parcels of land (part of the Bergner tract) with the Francis White estate. By these purchases and this exchange the city owns for park purposes, in fee simple, the entire block fronting on North avenue, from Eleventh street to the line of

Twelfth street, when opened. Some little work has been done on the Bergner property in clearing up and making it more available and attractive for park purposes, and permission to the public to fill on the Hilton property, which needs a considerable amount of material to bring it to proper grade, has been taken advantage of.

On the Frederick road, at the western end of the new bridge, the State Roads Commission, in the prosecution of their work, found it necessary to construct a high wall which would have practically destroyed the value of a residence located there. This property was almost surrounded by the Gwynn's Falls reservation and was within the proposed taking lines. The State Roads Commission offered to contribute the approximate cost of the wall to the purchase if this property were acquired by the Board, which was done at a cost of about $4,300; the State Roads Commission contributing $1,200 thereof.

It was decided to acquire, by purchase or condemnation, the nine properties fronting on Covington street, the back yards of which extended back to Federal Hill Park and have for many years been an eye-sore to those who use that park. Each of these properties, with one exception, had ground rents on them. All the ground rents have been acquired at the original price offered by the Board; namely, 5 per cent. There were several leasehold interests which could not be purchased at the price fixed by the Board, and the City Solicitor's office is now condemning the same. These lots, together with a lot on the corner of Hughes and Covington streets, acquired by the Harbor Board for the Key Highway, but which will not be used for that purpose for the present, and permission to use which for park purposes has been kindly given by the Harbor Board, will be devoted to playgrounds and tennis courts. The need for playgrounds in this immediate vicinity exists and has been appreciated for some time past. Accordingly, by this acquisition, not only will an eye-sore be removed from a park which is much used both by people living in that section and by many visitors to the city, who desire a bird's-eye view of the city and its splendid harbor and waterfront, but much needed playground facilities will be furnished.

In Wyman Park an old temporary wooden bridge which carried across a deep ravine the road sometimes called "Serpentine," after a life of more than ten years, began to show signs of decay and weakness. It was estimated that it could be repaired for approximately $4,000, but after repair it would not last but a few years. It was therefore decided to replace it with a concrete and rubble stone bridge, which would serve, if not forever, for at least several generations.

It was built under contract for a little over $16,000, a few dollars under the contract price, and paid for out of the fund set aside for maintenance.

The road served by this bridge is very much used, and its use in connection with the parkway uniting Druid Hill and Wyman Parks is constantly increasing.

The largest new improvement work was the parking and putting into shape of the so-called Patterson Park extension, which is separated from the main body of Patterson Park by Linwood avenue (formerly Patuxent street). The contract for this work was let to the lowest competitive bidder, and so far has cost about $54,000. The work under the contract has been completed, but there is still a good deal of work left to be done before this area will present the appearance of a completed park. It will contain, when finished, an area of about ten acres to be used for baseball, football, etc. The cost was taken out of that part of the loan authorized by the Act of 1904 standing to the credit of the southeastern section. This improvement and the Covington street acquisition, above referred to, will about exhaust the balance of the above-mentioned loan standing to the credit of that section.

The old ball field in Patterson Park was somewhat contracted and the use thereof somewhat interfered with because of the fact that the field was not on a uniform grade. As the work of the contractors on the sewerage system proceeded, certain of them asked for permission to deposit on this field the material excavated in the construction of the sewers in this neighborhood. Our Board took advantage of this opportunity and granted the permission under definite terms, etc., as to the character of the material, the disposition of the same and the saving of the top soil, etc. Under this permission, 31,553 cubic yards were deposited, and the contractors not only observed the various conditions and restrictions, but paid about $500 for the privilege of depositing and $451.72 for the excess over and above 25,000 cubic yards originally agreed upon. If this improvement had been made in ordinary times, when material fit to deposit in large quantities is scarce, the cost of the work would have been at least $15,000.

The City Springs Square, which is the best illustration of and argument for the need of small squares in our very congested neighborhoods, was improved by moving out the fences surrounding the children's playground and thereby increasing the area thereof.

In Riverside Park, the area devoted to the children's playgrounds, lawn tennis, etc., was also increased.

Attention may be called here to the increasing demand for tennis courts where there are none, and for more where they are. Thus, in Latrobe Park three courts were installed and in Clifton Park eight new courts were added. In Patterson Park, which already has many courts, it is expected to increase the number considerably during the coming year.

In Carroll Park the roads and paths were repaired and improved by the use of gravel and material taken from park property.

The forestry work commenced last year is going steadily forward and it is hoped that before the work is completed every tree is the various park areas will be carefully inspected and properly treated when necessary. The importance of the work of preserving the magnificent tree growth in our parks can hardly be exaggerated.

In the past year a large auto truck was purchased and its main use has been hauling the manure from 1,200 or 1,500 horses in the stables of the Fire Department, Street Cleaning Department and private stables scattered over the city. This arrangement with the other departments has been in effect but a comparatively short time, but, so far, has been satisfactory to all departments concerned. The work of the auto truck was so efficient and satisfactory that a new one has been purchased.

The two broad general propositions which have received serious consideration from the Board are the completion of the connecting parkways and the acquisition of two or three small squares for the eastern section of our city, where the population is most congested.

As to the first, a contract for the opening and improvement of Thirty-third street, which will run from Charles street to the Hillen road and form part of the connecting parkways between Wyman and Clifton Parks, has been let by the Commissioners for Opening Streets. This Board has appropriated $50,000 to cover the work of parking, etc., of this roadway. To complete the connection between Wyman and Clifton Parks, it is proposed to open and construct a wide parked street intersecting with Thirty-third street east of Venable Park and running in a general southeasterly direction to Harford road to a point opposite the main entrance to Clifton Park. We understand that in all probability this improvement will be undertaken during the present year. The most important, so far as expense is concerned, of these connecting parkways is Gwynn's Falls Parkway, which will unite Druid Hill and Gwynn's Falls Park. The Commissioners for Opening Streets have made their report on the assessment of benefits and damages for this work, but inasmuch as there will be some litigation in connection with this improvement, it is not at all probable that it will be possible to start work on the entire improvement. It is understood, however, that a section of this parkway will be commenced during the coming year.

We may add that we believe that this improvement, when completed, will be of as much advantage and benefit to the northwestern section as Broadway has proven, in the past years, to be to the eastern section of the city.

Very respectfully,

BOARD OF PARK COMMISSIONERS,

GEORGE WEEMS WILLIAMS, *President.*

Report of the General Superintendent

BALTIMORE, February 25, 1914.

To the Honorable Board of
Park Commissioners of Baltimore.

GENTLEMEN—Following is a general summary of the operations of the Department of Parks and Squares for the year 1913.

There was appropriated for expenses in the parks and squares for the past year $527,375.50; for new improvements, $73,624.50; and for acquirement out of the unexpended balance of the one million dollar acquirement loan authorized in 1904, $119,411.27, together with $36,000 taken from the regular street railway company's 1912 receipts, for park purposes.

The detailed receipts and expenditures can be seen by referring to the various statements of the Secretary and Treasurer, which are embodied in this report.

The total park area under the jurisdiction of the Board of Park Commissioners is 2,401.64 acres, divided into fifty separate parkings—each street parking being considered as one park, although it may be a mile and a half long and divided by many cross streets. These separate parkings vary in size from approximately one acre to about 721 acres, which is the approximate area of Druid Hill Park.

Since 1905 there has been a very marked advance in the development of the parks for athletic and playground purposes, as well as a very marked advance in the careful upkeep of the finished areas, and a great deal done in the way of foresting and improving the condition of newly-acquired areas in the way of plowing, leveling and seeding, and in Gwynn's Falls

Park in making a walkway for pedestrians on the site of an old mill race, which winds along the side of the Gwynn's Falls Valley about half way up its side, providing a beautiful and most interesting scene for a distance of about three miles.

In Druid Hill Park there are twelve miles of roads and fourteen miles of paths, most all of the surfaces of which have been very materially improved and, during the last two years, nearly all of the macadam road surfaces have been treated with a liquid largely composed of tar, which was covered with coarse sand and fine gravel, rendering these surfaces smooth and hard and entirely preventing their erosion by heavy rains to which Baltimore is subject.

In addition to the usual supply of ground bone, tankage and condensed fertilizers, a large amount of which is annually used, there has been used during the past year the product of 1,200 horses collected from the various Fire Department's, Street Cleaning Department's and about twenty other stables where large numbers of horses are kept. This has required the use of a five-ton automobile truck, manned by two chauffeurs and six laborers working two shifts of eight hours each per day, which collected about 15,000 cubic yards of manure at a cost of approximately 28 cents per cubic yard for collecting and about 20 cents per cubic yard for purchasing the material at the various stables.

This material has been most valuably used principally on steep side hill surfaces where erosion has taken place, leaving bare the roots of forest trees.

The most important improvement undertaken during the year has been the grading, top soiling and path building of a 20-acre area forming an extension to Patterson Park, as well as the installation of drainage catch basins and their outletting pipe lines, the construction of electric light ducts, manholes and light post foundations, together with the digging of tree pits and filling them with loam to the extent of three cubic yards each.

This work has cost approximately $60,000, leaving for future completion the lawn seeding, the planting of trees and shrubs, the erection of the electric light posts and installation of the lighting cables and post equipment, as well as the surfacing and equipment, with athletic appliances, of the ten-acre athletic field there provided.

Another decided improvement accomplished was the erection of heavy stone retaining walls for the Wyman Park road. The cost of these, with the road supported by them, was about $18,000.

In the old playfield area at Patterson Park, a low-lying section in which there was a ball field has been filled to the extent of about 31,553 cubic yards of earth. This material was furnished to the Park Department without cost. In fact, the Park Department received about $1,000 from contractors for the privilege of depositing material on this area, and at Clifton Park over 50,000 cubic yards of filling material was received, at points requiring the same, by public dumpage.

During the year an average of twenty men were employed in Druid Hill Park in trimming trees and repairing decayed cavities in them, and another gang of men were employed in taking out trees which were crowding the neighboring trees.

In Druid Hill Park the stone-crushing plant at the quarry has run throughout the year, producing over 12,000 cubic yards of crushed stone, which has been used in resurfacing portions of Druid Hill Park.

About 65,000 gallons of liquid tar composition and 35,000 gallons of heavy asphaltic base Mexican oils were used during the year on the surfaces of the roads and paths.

About $5,000 was spent on Green Spring avenue in resurfacing between Druid Hill Park and the Old Pimlico road.

The music court in Druid Hill Park, outside of the brick walk, was surfaced with about five inches of crushed stone and then penetrated with tar, making the entire music court hard surfaced, and surrounding the music court were constructed stationary benches for seating the public.

About 50,000 lineal feet of red cedar was used in constructing railings along the edges of roads where the ground sloped rapidly away from their edges.

A large number of stationary benches were constructed along either side of Swann avenue, between the Madison Avenue Entrance Arch and Washington Statue, as well as along either side of the path paralleling Evergreen Terrace, and also along the paths lying west of Druid Lake.

About 40,000 shrubs were planted in Druid Hill and Wyman Parks.

A new steel flag pole, 110 feet high, was installed at the Madison Avenue Entrance Arch in place of the old wooden pole.

Four new buildings were erected at the zoo—one each for the elk, buffalo, deer and fowl—and a general overhauling and repair of the other buildings at the zoo was accomplished.

The tennis courts and ball grounds in Druid Hill Park were constantly in use from early spring until late fall.

At Ashburton Park a large amount of leveling, seeding and forestry work was accomplished.

At Patterson Park concrete steps were installed in the vicinity of the athletic field house, replacing wooden ones, and four new shower baths were installed in the athletic field house; children's playground areas were resurfaced and a children's garden installed.

An iron fence, replacing a wooden one, was constructed on the north side of the athletic field and also on the north side of the children's playground and new athletic apparatus was installed, and the arrangement of the apparatus in the children's playground improved.

An underground system of electric lighting was extended at Patterson Park.

A high fence surrounding the stable yard was constructed, as well as additional wagon sheds and storage buildings.

The old range of greenhouses for growing bedding stock, located on the Eastern avenue side of Patterson Park, were taken away; one short range was allowed to remain for the use of quoit player's.

About 140 arrests for various offences were made during the year.

Over 2,000 tennis permits were issued and over 130 running track events took place and about fifty soccer and football games were played. The baseball grounds were also in constant use.

At Latrobe Park a large amount of filling and grading was done on its extension and three tennis courts installed there.

The underground system of lighting was extended and 500 watt lights installed.

The wooden flag pole at Riverside Park was taken down, as is was found to be in a dangerous condition.

The extension of the children's playground, the athletic areas and the tennis courts was accomplished and they were all electrically lighted.

At City Springs Square the entire children's playground section was rearranged and its area extended and an underground electric lighting system installed.

The athletic fields, children's playground areas, ball and soccer fields at Carroll Park were all persistently used throughout the spring, fall and summer months.

The running track and infields of the athletic area were resurfaced, as was also the children's playground areas. Roads and paths were also resurfaced and the Monroe street side of the park graded and seeded and a boundary fence and hedge installed.

In order to suppress the dust on the ball fields, 10,000 gallons of oil were used upon their surfaces.

In connection with the ball fields, stationary benches were installed.

At the children's playground a water supply was installed in the buildings, as well as electric light.

The increased use of the athletic fields required the installation of thirty-six additional lockers at the shower bath rooms.

The tennis courts were resurfaced and new backstops erected.

There were over 1,000 permits issued for tennis games, and over 225 baseball games played.

Seventy thousand tender bedding plants were grown in the Carroll Park greenhouses and 100,000 pansy plants for summer bedding in the various parks and squares.

At Gwynn's Falls House of Refuge property a thorough overhauling and repair of the rooms occupied by the caretaker and family was accomplished.

The athletic field area, lying between the Frederick road and Wilkens avenue, was improved, a rustic bridge built across a stream and rustic benches installed.

About forty tons of hay was made and baled in that portion of Gwynn's Falls below Edmondson avenue, and about thirty tons in that portion lying between Edmondson avenue and Windsor Hills.

In Clifton Park the athletic fields, children's playground areas, as well as the ball and soccer field areas, were very largely used.

About 200,000 bedding plants for use in the various parks and squares were grown, together with 100,000 pansies.

Eight new tennis courts were installed, making a total of about thirty courts, which were largely used throughout the season.

In Gwynn's Falls reservation the Department acquired about thirteen acres of additional land, including a large brick house and stable.

The grounds of this property had for years been neglected and these were cleaned and improved, together with the taking down of an old range of greenhouses; an old dilapidated wooden barn and a cottage house with its outbuildings were also removed.

The Gwynn's Falls mill race was persistently used throughout the season by visitors and the trees along the line of this walkway were pruned.

At Mount Vernon Square the display fountains were put in thorough repair.

The Holliday street side of the City Hall was decorated and cared for by the Park Department from early June until frost time.

The Engineering Department was busy throughout the year in making various surveys, plans for construction, supervising the various contracts, looking up property maps and estimate making.

Respectfully submitted,

William S. Manning,
General Superintendent.

Report of the Secretary, 1913

BALTIMORE, January 29, 1914.

To the Honorable Board of Park Commissioners.

GENTLEMEN—I submit herewith my report as Secretary of the Board of Park Commissioners, showing in detail the receipts and disbursements of the Park Department for the year ending December 31, 1913.

Very respectfully,

J. V. KELLY,
Secretary.

Financial Statement

FOR YEAR ENDING DECEMBER 31, 1913.

		Dr.	Cr.
Cash on hand January 1, 1913, made up of accumulated balances as follows:			
Receipts in excess of expenditures, year 1901			$4,686 31
Receipts in excess of expenditures, year 1902			6,211 22
Receipts in excess of expenditures, year 1903			7,732 74
Receipts in excess of expenditures, year 1904			13,151 71
Receipts in excess of expenditures, year 1905			55,969 14
Excess of expenditures over receipts, year 1906		$16,319 82	
Receipts in excess of expenditures, year 1907			38,812 79
Excess of expenditures over receipts, year 1908		73,669 18	
Receipts in excess of expenditures, year 1909			7,312 29
Receipts in excess of expenditures, year 1910			21,305 34
Excess of expenditures over receipts, year 1911		63,757 06	
Receipts in excess of expenditures, year 1912			40,379 27
		$153,746 06	$195,560 81
			153,746 06
Total cash on hand January 1, 1913			$41,814 75
Receipts, 1913:			
Railway tax	$580,846 11		
Rentals	3,520 37		
Sales	1,179 21		
Electric current	2,395 62		
Fines	671 58		
Remittances	880 83		
Monument toll	557 40		
State Roads Commission Refund	2,331 36		
Total receipts, 1913	$592,382 48		
Total appropriation (Revenue) 1913	$637,000 00		
	592,382 48		
	$44,617 52	$44,617 52	
Amount carried forward			$41,814 75

Amount brought forward $41,814 75

DISBURSEMENTS ON APPROPRIATIONS.

Salaries—Office:				
Appropriation		$5,288 00		
Disbursed	$5,266 81			
Balance	21 19			21 19
		5,288 00		
Salaries—Parks and Squares:				
Appropriation		$245,549 50		
Disbursed	$240,201 88			
Balance	5,347 62			5,347 62
		245,549 50		
Expenses—Office:				
Appropriation		$2,000 00		
Disbursed	$1,912 13			
Balance	87 87			87 87
		2,000 00		
Expenses—Parks and Squares:				
Appropriation		$274,538 00		
Disbursed:				
Maintenance	$141,357 65			
Fixed charges	127,662 41			
	$269,020 06			
Balance	5,517 94			5,517 94
		274,538 00		
New Improvements:				
Appropriation		$73,624 50		
Disbursed	$19,079 75			
Balance	54,544 75			54,544 75
		73,624 50		
Addition to Gwynn's Falls (O. 172–1912):				
Appropriation		$36,000 00		
Disbursed	$36,000 00			
Balance	....			....
		36,000 00		
Total credit balance				$107,334 12
Total debit balances			$44,617 52	44,617 52
Revenue cash on hand January 1, 1914				$62,716 60

Revenue cash on hand January 1, 1914	$62,716 60
Loan balance (cash) Northeast Section	18,936 15
Loan balance (cash) Southeast Section	10,082 90
Loan balance (cash) Southwest Section	23,959 05
Total cash on hand January 1, 1914	$115,694 70

RECEIPTS IN DETAIL, 1913.

Balance, January 1, 1913	$41,814 75
Railway Tax, 1913	580,846 11
Rentals:	
Mansion, Druid Hill	671 00
Stand at Zoo, Druid Hill	192 20
Stand, Patterson	150 21
Cottages, Herring Run	347 00
Cottage, Reservoir, Druid Hill	16 00
Lakes, Druid Hill	700 00
Lakes, Patterson	340 00
Dwelling, Wyman	433 29
Dwelling, Bergner property	458 37
Towels at showers and lavatories	212 30
Sales:	
Wood	37 50
Sheep	61 25
Wool	106 04
Old materials	31 90
Dumping privilege, Patterson	500 00
Hay	354 00
Old buildings	35 00
Scrap paper	2 16
Old horse carcass	2 00
Cedar poles	1 15
Tree guards	8 96
Blue prints	15 00
Old wagon	15 00
Plants	9 25
Electrical service	2,395 62
Fines	671 58
Monument toll, Washington Monument	557 40
Remittances, orders, rolls and coal	880 83
Remittances, expenses on account State Roads Commis'n	2,331 36
	$634,197 23

EXPENDITURES IN DETAIL, 1913.

SALARIES—OFFICE.

Original appropriation		$5,288 00

DISBURSEMENTS.

Secretary-Treasurer, J. V. Kelly	$1,800 00	
Assistant to Secretary, Clark Kerr	1,091 59	
Clerk, Helen M. Spangler	871 63	
Clerk, Margaret M. Hanson	624 00	
Clerk, Bertha P. Pfeiffer	624 00	
Boy, W. Howard Austin	255 59	
Total disbursements		5,266 81
Surplus of credit		$21 19
Balance to surplus, Park Board, 1914		21 19

EXPENSES—OFFICE.

Original appropriation		$2,000 00

DISBURSEMENTS

Stamps and postals	$229 94	
Stationery and printing	793 44	
Advertising	346 10	
Subscriptions to papers	8 31	
Directory	7 00	
Typewriter supplies and repairs	48 94	
Furniture	42 72	
Sundries (ice, washing towels, etc.)	66 06	
Bond premiums	30 00	
Telegrams and expressage	1 63	
Telephones	337 99	
Total disbursements		1,912 13
Surplus of credit		$87 87
Balance to surplus, Park Board, 1914		87 87

SALARIES—PARKS AND SQUARES.

Original appropriation		$245,549 50

DISBURSEMENTS.

Administration, parks	$4,836 95	
Superintending, parks	8,150 42	
Conservatory, greenhouse and nursery	13,034 71	
Outdoor gardening and forestry	34,244 57	
Lawns and fields	43,613 07	
Roads, drives and gutters	17,900 25	
Paths, walks, steps and benches	11,765 98	
Athletic fields and playgrounds	10,000 99	
Buildings, pavilions and toilets	14,182 01	
Policing and gatekeeping	33,520 97	
Livestock, stable work	5,401 09	
Zoological collection	4,678 85	
Fountains, springs and pumps	544 94	
Lakes and ponds	291 50	
Quarry	7,432 69	
Repair shop and shoeing	2,790 52	
General work, unclassified	12,764 59	
Monuments	823 21	
Automobile, (Auto truck, see "Lawns and Fields")	1,312 50	
Electric lighting	2,117 83	
Park concerts	10,794 24	
Total disbursements		240,201 88
Surplus of credit		$5,347 62
Balance to surplus, Park Board, 1914		5,347 62

NOTE—The following salaries are included in "Administration Parks":

General Superintendent, William S. Manning	$3,600 00
Property Agent, Carl K. Mengel	1,236 95

NOTE—The following salaries are included in "Superintending Parks":

Superintendent of Druid Hill District, Charles R. Jones ..	$1,745 00
Superintendent of Patterson District, Lloyd Norris.......	1,745 00
Superintendent of Clifton District, James W. Boone......	1,745 00
Superintendent of Washington Monument and Upper Gwynn's Falls, Noah F. Flitton........................	1,170 42
Superintendent of Carroll District and Squares, J. Fred Wessler...	1,745 00

EXPENSES—PARKS AND SQUARES.

Original appropriation.................................		$274,538 00

DISBURSEMENTS.

Administration, parks........................	$794 15	
Special audit, Park Tax................	2,463 85	
Superintending parks........................	1,405 81	
Conservatories and greenhouses	3,384 02	
Outdoor gardening and forestry	6,532 73	
Lawns and fields	9,996 78	
Roads, drives and gutters	18,707 78	
Paths, walks, steps and benches	5,590 75	
Athletic fields and playgrounds, general.....	5,532 60	
Buildings, pavilions and toilets	11,231 65	
Policing and gatekeeping....................	2,602 21	
Live stock, stable, etc....	6,700 22	
New stock, horses..........................	1,550 00	
Zoological collection	4,163 51	
Fountains, springs and pumps...............	610 10	
Quarry.....................................	1,230 89	
Repair shop and shoeing	1,531 36	
New auto truck	4,842 90	
Supplies, general, flags, etc.	1,819 49	
Renewal flag poles	866 71	
Monuments	39 59	
New stone bridge, Wyman	16,180 86	
Electrical equipment, upkeep................	4,145 01	
Electrical lighting service	19,128 63	
Gas, oil and naphtha lighting................	5,651 48	
Amounts carried forward...............	$137,753 08	$274,538 00

Amounts brought forward	$137,753 08	$274,538 00
Automobile and auto truck supplies and repairs	2,598 26	
Telephones	751 00	
Expenses, Bergner property purchase	164 40	
Title examination, White estate	75 00	
Illumination, Battle Monument (from 1912)	15 91	
Sinking Fund, old loans	29,042 29	
Interest, Clifton loan	35,000 00	
Interest, Patterson loan	8,000 00	
Sinking Fund, 1955 loan	8,800 00	
Interest, 1955 loan	40,000 00	
Ground rents	6,820 12	
Total disbursements		269,020 06
Surplus of credit		$5,517 94
Balance to surplus, Park Board, 1914		5,517 94

NEW IMPROVEMENTS, 1913.

Original appropriation		$109,624 50
DISBURSEMENTS.		
Park extension (Northwest) out of revenue	$36,000 00	
Bridge, Wyman Drive (See "Expenses—Parks")	0 00	
Filling and top soiling, Wyman Park	5,276 28	
Parking squares, Twenty-ninth street (from 1912)	14 00	
Parking squares, Thirty-third street (from 1912)	18 00	
Brick stable, Carroll Park (from 1912)	4 77	
Grading and seeding Harford road, Clifton	727 38	
Entrance post lights, Riverside Park (from 1912)	71 93	
Concrete caps on entrance posts, Johnston Square (from 191?)	32 50	
Electric fountain, Druid Lake (from 1912)	32 33	
Illumination, monuments and floral emblem (from 1912)	46 80	
Rustic cedar seats and guard railings, materials	2,694 73	
Amounts carried forward	$44,918,72	$109,624 50

Amounts brought forward	$44,918 72	$109,924 50
Architects and consulting engineers	1,956 81	
Park Engineering Corps	8,204 22	
Total disbursements		55,079 75
Surplus of credit		$54,544 75
Balance to surplus, Park Board, 1914	$4,544 75	
Balance to account, Thirty-third street parking, 1914	50,000 00	
		54,544 75

PARK EXTENSION, 1913

SOUTHWEST SECTION

(Funds taken from the proceeds of the $1,000,000 loan authorized by Chapter 338 of the Acts of the General Assembly of Maryland of 1904 and Ordinance No. 228, approved March 20, 1905.)

Appropriation		$250,000 00
Disbursements, 1906	$121,138 15	
Disbursements, 1907	11,792 47	
Disbursements, 1908	84,227 21	
Disbursements, 1909	2,582 71	
Disbursements, 1910	83 33	
Disbursements, 1911	....	
Disbursements, 1912	....	
		219,823 87
Balance, December 31, 1912		$30,176 13
Less discount on sale of stock		2,760 18
Balance to 1913 account		$27,415 95
Credits 1913, from State Roads, account Heiland property		1,200 00
		$28,615 95

DISBURSEMENTS.

Voucher No.	Paid to.	For.	Amount.
2200	Mary A. Heiland...	Land......	$250 00
2274	Edw. P. Crummer .	Title exam.	25 00
2298	Stephen C. Little...	Recording.	2 50
2331	Mary A Heiland...	Land......	4,352 60
2317	Stephen C. Little...	Recording.	3 00
2307	Mary A. Heiland...	Bal due...	23 80

Total disbursements	4,656 90
Balance, December 31, 1913	$23,959 05

PARK EXTENSION, 1913.

NORTHEAST SECTION.

(Funds taken from the proceeds of the $1,000,000 loan authorized by Chapter 338 of the Acts of the General Assembly of Maryland of 1904 and Ordinance No. 228, approved March 20, 1905.)

Appropriation		$250,000 00
Disbursements, 1906	$741 70	
Disbursements, 1907	67,359 79	
Disbursements, 1908	142,924 10	
Disbursements, 1909	1,618 75	
Disbursements, 1910	1,236 03	
Disbursements, 1911	11,478 80	
Disbursements, 1912	2,947 50	
		228,303 67
Balance, December 31, 1912		$21,696 33
Less discount on sale of stock		2,760 18
Balance to 1913 account		$18,936 15

(No disbursements.)

PARK EXTENSION, 1913.

SOUTHEAST SECTION.

(Funds taken from the proceeds of the $1,000,000 loan authorized by Chapter 338 of the Acts of the General Assembly of Maryland of 1904 and Ordinance No. 228, approved March 20, 1905.)

Appropriation		$250,000 00
Disbursements, 1906	$1,634 84	
Disbursements, 1907	135,684 63	
Disbursements, 1908	36,711 17	
Disbursements, 1909	150 00	
Disbursements, 1910	....	
Disbursements, 1911	....	
Disbursements, 1912	....	
		174,180 64
Balance, December 31, 1912		$75,819 36
Less discount on sale of stock		2,760 19
Balance to 1913 account		$73,059 17
Credits 1913, from ground rents, Covington street		80 00
		$73,139 17

DISBURSEMENTS, 1913.

(Extension and Improvement.)

Voucher No.	Paid to.	For.	Amount.
1255	Jas. Q. Farmer	Title examination	$135 00
1392	Wm. C. Rupp	Land	1,496 03
1403	W. T. Childs, Dep. Com.	Recording	2 50
1718	Solomon F. Tyler	Land (Interest in)	699 21
1726	Stephen C. Little	Recording	2 25
1727	Pearson, Ruark, et al	Land (Interest in)	1,087 57
1728	Sallie H. Conrad	Land (Interest in)	1,629 16
1731	John F. Murphy	Professional services	37 50
1847	Stephen C. Little	Recording	6 00
1866	Wm. F. Broening and wife	Land (Interest in)	818 92
1903	Stephen C. Little	Recording	2 50
2181	Elizabeth Koerner	Land (Interest in)	1,611 40
2198	Stephen C. Little	Recording	2 75
2305	Juliette E. Lewis	Land (Interest in)	554 38
2308	Kate A. Stran	Land (Interest in)	810 85
2314	Stephen C. Little	Recording	2 50
1424	Park Payroll—1 week	Patt. Exten. Imps.	53 50
1432	Park Payroll—1 week	Patt. Exten. Imps.	38 50
1562	Simplex Wire & Cable Co.	Lead cable	515 16
1563	J. L. Gilbert & Bro.	Engineering stakes	12 50
1565	Park Payroll	Patt. Exten. Imps.	5 50
1642	Griffith & Turner Co.	Galv. wire cloth	21 00
1893	Wm. Poetter & Son	Iron bands	24 00
2106	E. McClintock	Cedar poles	260 32
2277	Westinghouse Elec. M. Co.	Regulation and switch	393 27
2304	Collector Water Rents	New supplies	108 18
2315	Simplex Wire & Cable Co.	Rubber tape, lead cov.	450 50
2346	Conard & Jones Co.	Ber. Thunbergii	364 00
2362	P. B. & W. R. R.	Freight	8 16
2404	D. B. Martin Co.	Tankage	120 00
2411	Griffith & Turner Co.	Grass seed	252 28
2477	Amer. Steel & Wire Co.	Barb. wire and staples	67 64
2479	Park Payroll—1 week	Patt. Exten. Imps.	63 25
1433	Austin & Humphreys	Patt. Exten. contract	411 52
1592	Austin & Humphreys	Patt. Exten. contract	2,457 71
1732	Austin & Humphreys	Patt. Exten. contract	6,012 08
1974	Austin & Humphreys	Patt. Exten. contract	6,394 08
1991	Austin & Humphreys	Patt. Exten. contract	5,414 69
2188	Austin & Humphreys	Patt. Exten. contract	8,271 39
2211	Austin & Humphreys	Extra on path	8 92
2285	Austin & Humphreys	Patt. Exten. contract	8,106 86
2433	Austin & Humphreys	Patt. Exten. contract	14,322 74

Total disbursements	63,056 27
Balance, December 31, 1913	$10,082 90

SUMMARY.

Showing payments made on account of Park Extension out of $1,000.000 Loan in each section of the city, December 31, 1913.

ACCOUNT.	Northwest.	Southwest.	Northeast.	Southeast.	Total.
Purchase price of land	$235,356 06	$217,551 79	$221,284 11	$180,013 28	$854,205 24
Buildings on land	1,250 00				1,250 00
Tax adjustments	477 26	610 40	18 16		1,105 82
Acknowledgments	24 30	17 10	2 20	6 70	50 30
Recording deeds	220 00	95 15	92 45	52 75	460 35
Appraising property	1,475 00	150 00	425 00	950 00	3,000 00
Title examination and abstracts	3,130 40	2,691 65	1,746 30	1,274 95	8,843 30
Surveying	2,878 36	1,418 79	644 45	206 49	5,148 09
Olmsted Bros., advice and plans	910 27	750 48	876 07	62 50	2,599 32
Clerical and other help	1,229 01	1,098 83	1,625 01	512 49	4,465 34
Auctioneers' and attorneys' fees		50 00	100 00		150 00
Advertising	208 38		250 42		458 80
Plats, maps, etc	42 20	26 58	1,102 50		1,171 28
Car tickets	10 00	20 00	50 00		80 00
Court costs	28 59				28 59
Ground rent			87 00		87 00
Improvement, Patterson extension				54,157 75	54,157 75
Total	$247,239 83	$224,480 77	$228,303 67	$237,236 91	$937,261 18
Amount of Loan	$250,000 00	$250,000 00	$250,000 00	$250,000 00	$1,000,000 00
Less discount on sale of stock	2,760 17	2,760 18	2,760 18	2,760 19	11,040 72
Appropriation	$247,239 83	$247,239 82	$247,239 82	$247,239 81	$988,959 28
Credits		1,200 00		80 00	1,280 00
Totals available	$247,239 83	$248,439 82	$247,239 82	$247,319 81	$990,239 28
Disbursements (see above)	247,239 83	224,480 77	228,303 67	237,236 91	937,261 18
Cash balance		$23,959 05	$18,936 15	$10,082 90	$52,978 10

PARK ACREAGE, DECEMBER 31, 1913.

	Acquired.	Acreage.	Ground Rent.	Cost.
Mt. Vernon Squares (2)	1815	1.4		Donated.
Washington Place Squares (2)	1815	.9		Donated.
Eastern City Spring Square	1818	1.3		$15,000 00
Patterson Park	1827	128.44		465,157 29
Franklin Square	1839	2.3		10,000 00
Jackson Square	1844	.6		Donated.
Union Square	1847	2.0		Donated.
Broadway Squares (19)	1851	5.7		28,661 48
Ashland Square	1851	.01		200 00
Madison Square	1853	3.4		30,000 00
Eutaw Place Squares (9)	1853	5.6		60,000 00
Lafayette Square	1859	2.9		15,000 00
Druid Hill Park	1860	674.16		720,760 53
Park Place Squares (5)	1860	1.7		Donated.
Riverside Park	1862	17.2	$3,770 62*	77,488 78
Fulton Avenue Squares (17)	1866	4.0		Donated.
Harlem Park	1869	9.05		Donated.
Wilkens Avenue Squares (7)	1870	1.6		30,000 00
Perkins Spring Square	1873	1.5	2,052 00*	34,200 00
Mt. Royal Squares (7)	1874	2.0		9,790 28
Johnston Square	1877	2.5		20,000 00
Federal Hill Park	1879	8.42	37 50	106,135 46
Collington Square	1880	5.0	960 00*	24,000 00
Liberty Triangle	1880	.02		Donated.
Taney Place Squares (2)	1881	.8		Donated.
Mt. Royal Terraces (3)	1884	2.0		44,677 58
Carroll Park	1890	176.74		307,229 42
Bolton Park (Mt. Royal Station)	1891	2.52		103,433 00
Frick Triangle	1892	.05		Donated.
Brewer Square	1892	.39		Donated.
Bo-Lin Square	1893	.23		Donated.
Maple Place	1893	.07		Donated.
Clifton Park	1895	267.26		754,125 81
Linden Avenue Triangle	1895	.01		Donated.
Green Spring Avenue	1896	25.5		Donated.
Callow Triangle	1898	.03		Donated.
Gwynn's Falls Park	1902	390.3		329,809 80
Latrobe Park	1902	13.80		40,590 00
Swann Park	1902	11.31		39,474 52
Wyman Park	1903	198.39		122,604 12
Fifth Regiment Armory	1904	.25		Donated.
City College Lot	1904	.14		Donated.
Riggs Triangle	1905	.02		456 00
Venable Park	1907	60.81		67,726 00
Ashburton Park	1907	92.65		36,052 40
Herring Run Park	1908	164.61		112,059 46
Charles Street Boulevard	1908	2.28		23,823 51
Philadelphia Triangle	1910	1.0		26,737 52
Easterwood Park	1911	7.52		23,500 00
Mondawmin Squares	1911	.26		Donated.
Total Park Acreage		2,401.64		$3,678,692 96

*Owned by Commissioners of Finance.

THIRD ANNUAL REPORT

OF THE

PAVING COMMISSION

To the Mayor and City Council of Baltimore for
the Year Ended December 31, 1913

1797

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER

1914

Paving Commission's Report.

OFFICE OF THE PAVING COMMISSION,
BALTIMORE, MARYLAND.

BALTIMORE, January 1, 1914.

HON. JAMES H. PRESTON, *Mayor.*

DEAR SIR—In accordance with the requirements of Section 1, Chapter 401, Acts of General Assembly of Maryland for the year 1906, the Paving Commission has the honor to make the following report of its operations and transactions for the period embraced from December 31, 1912, to the close of business December 31, 1913.

MEETINGS.

The regular sessions of this Commission are usually held on Wednesdays at 3 P. M. in the Council Chambers. During the year fifty-three sessions were held, at which a quorum was present at fifty-one.

MATERIALS.

The Commission is still adhering to its general policy, as laid down soon after its organization, in paving heavy traffic streets with granite block, medium traffic business streets with vitrified block, and medium traffic residential streets with sheet asphalt and bituminous concrete—all on a concrete foundation. Our recent specifications have, however, been somewhat revised and strengthened for bituminous concrete, in respect to the mineral aggregate, in order to obtain, if possible, a first-class pavement at a minimum figure. Our bids on this material have shown such a slight saving, as between bituminous concrete and sheet asphalt, that the Commission deems it advisable to adhere very closely to the latter material. This is more particularly the case since we have fixed a standard of one and one-half inches of sheet asphalt topping, in conformity with the most up-to-date practice in other cities.

In order to obtain a serviceable pavement at minimum cost in alleys in the residential section where the traffic is limited and concentrated, but only consists of an occasional garbage cart and ice wagon, we are now designing some concrete construction for this purpose and will shortly award a contract for the same. Vitrified block on a four-inch concrete base, as originally designed for these alleys, would cost at least two dollars a square yard, owing principally to the difficulty in handling labor and materials in such contracted spaces. We should be able to obtain first-class concrete construction for about one dollar and twenty-five cents per square yard. The saving would not only consist of this difference, but a considerable amount of grading would also be saved. Should cracks appear in the concrete, which will very likely be the case, they can be cleaned out and poured with bitumen and still render the pavement serviceable.

Most of our exceedingly heavy traffic streets have already been improved, so that undoubtedly there will not be a very large amount of granite block in the future. The amount of vitrified block will also probably be less.

We are still endeavoring to operate in accordance with a general plan and in every section of the city where the improvement of streets would be of a distinct benefit to the public generally. As is well known, however, our operations are limited to those territories where the sewers, both sanitary and storm, have been completed. During the season of 1913 we not only improved streets in the central section of the city, but also in the northwestern, southwestern and southern sections, as well as to a limited extent in the territory east of the Fallsway and north of Fayette street, which latter section has been exceedingly well improved during the two years this Commission has been in operation.

A close examination of our attached map for 1912-13 will show that we have succeeded very well in distributing the improved pavements.

In improving streets in the central section of the city, which were improved thirty-five or forty years ago with old style granite block on sand, we are endeavoring, as far as possible, to put down smooth pavements, such as sheet asphalt and vitrified block. The old granite block taken up is not an entire loss, as they can be redressed, when necessary, and relaid on heavy traffic streets in the freight territories. A few contracts have been let on this basis with apparently economical results, but only time alone will give us accurate results in this direction. Of course, when relaid, they are put on a concrete base with the joints filled with either cement or bitumen and gravel. There is no doubt that a pavement so laid is substantial.

It might be well to state here that while the Commission has abandoned the practice of resurfacing cobble, as explained in our 1912 report, the taking up of cobble is not an entire loss, as the contractors are required to allow the city a figure for this old material, which amounts to anywhere from one cent to twenty cents a square yard. Wherever possible the contractors have been allowed to install crushers with the privilege of crushing this material and using it for the concrete base.

We have given the street railway construction in this city considerable study. We are now considering the situation very carefully with the view of recommending, possibly, some legislation compelling the railway companies to install concrete under and around their ties, which practice is being pursued in nearly all up-to-date municipalities, as can be substantiated by authorities.

Our street railway construction is now on ballast under the ties, with concrete between and over them as a base for the paving. The paving over such construction may look very well for the first few years, but the strain of the heavy equipment which is now being operated by the street railway companies, and ever on the increase from year to year, will undoubtedly produce such vibration as to cause the pavement to loosen and go to pieces adjacent to the rails. In our judgment, therefore, this matter requires the most urgent and close study.

Cost Figures, Engineering and Inspection.

We still believe that a close examination of our contract figures will show that Baltimore is laying pavements in as economical a manner as any other city in the United States, consistent, of course, with good work, and in this connection we respectfully refer you to Table A, showing the average unit prices paid during the year. A comparison of the 1913 table with that of 1912 will show a slight increase, particularly in granite block and vitrified block. This slight increase is probably due to the fact that our inspection is closer and more in detail.

It must be realized that starting a $10,000,000 paving proposition in the City of Baltimore is a very extensive undertaking. It is true that some of our engineers and inspectors at the beginning of the work may have been somewhat inexperienced, necessitated by the fact that previous to 1912 no paving of such magnitude had ever been carried on in this city; and, therefore, enough experienced men to carry on the proposition could not be secured in Baltimore at that time, particularly when you stop to consider all of the vast engineering undertakings the city had and still has on hand. All of these men were selected for merit only and we now have a good organization. As time went on they became more experienced, were able to

TABLE "A."

Record of Accepted Bids for Paving per Square Yard During the Years of 1912 and 1913.

Kind of Paving.	Base.	Wearing Surface or Filler.	Year of 1912.								Year of 1913.								Remarks.
			Citv Area.				Railway Area.				City Area.				Railway Area.				
			Number of Bids.	Low.	High.	Average.	Number of Bids.	Low.	High.	Average.	Number of Bids.	Low.	High.	Average.	Number of Bids.	Low.	High.	Average.	
Sheet asphalt paving	Cobble	1½-inch topping	9	$0.71	$0.80	$0.76	....	....	....	....	....	....	....	....	....	....	....	....	Does not include the cost of the binder course.
Sheet asphalt paving	Cobble	2 -inch topping	5	.77	.93	.82	....	....	....	....	....	....	....	....	....	....	....	....	Does not include the cost of the binder course.
Sheet asphalt paving	4-inch concrete	1½-inch topping	7	1.42	1.70	1.55	....	....	....	....	....	....	....	....	....	....	....	....	Includes 1½-inch binder course.
Sheet asphalt paving	4-inch concrete	2 -inch topping	4	1.59	1.67	1.62	....	....	....	....	....	....	....	....	....	....	....	....	Includes 1½-inch binder course.
Sheet asphalt paving	5-inch concrete	1½-inch topping	....	....	....	....	....	....	....	....	1	$1.57	$1.57	$1.57	....	....	....	....	Includes 1½-inch binder course.
Sheet asphalt paving	6-inch concrete	1 -inch topping	....	....	....	....	....	....	....	....	1	1.55	1.55	1.55	....	....	....	....	Includes 1½-inch binder course.
Sheet asphalt paving	6-inch concrete	1½-inch topping	3	1.65	1.69	1.67	1	$1.98	$1.98	$1.98	10	1.62	1.75	1.66	1	$1.80	$1.80	$1.80	Includes 1½-inch binder course.
Sheet asphalt paving	6-inch concrete	2 -inch topping	8	1.62	1.76	1.71	3	1.83	1.87	1.85	4	1.70	1.85	1.74	....	....	....	....	Includes 1½-inch binder course.
Sheet asphalt paving	8-inch concrete	1½-inch topping	....	....	....	....	....	....	....	....	1	1.89	1.89	1.89	....	....	....	....	Includes 1½-inch binder course.
Binder per ton	....	....	12	4.10	4.50	4.38	....	....	....	....	....	....	....	....	....	....	....	....	Price per ton, delivered, spread and rolled.
Bituminous concrete paving	Cobble	1½-inch surface	2	.67	.67	.67	....	....	....	....	....	....	....	....	....	....	....	....	Does not include a paint coat or a sealing coat.
Bituminous concrete paving	Cobble	1½-inch surface	1	.80	.80	.80	....	....	....	....	....	....	....	....	....	....	....	....	Includes a sealing coat.
Bituminous concrete paving	Cobble	2½-inch surface	2	.82	.82	.82	....	....	....	....	....	....	....	....	....	....	....	....	Does not include a paint coat or a sealing coat.
Bituminous concrete paving	4-inch concrete	2 -inch surface	4	.95	1.42	1.22	....	....	....	....	....	....	....	....	....	....	....	....	Does not include a paint coat or a sealing coat.
Bituminous concrete paving	4-inch concrete	2 -inch surface	3	1.25	1.45	1.36	....	....	....	....	....	....	....	....	....	....	....	....	Includes a paint coat.
Bituminous concrete paving	4-inch concrete	2 -inch surface	4	1.05	1.51	1.34	....	....	....	....	3	1.25	1.38	1.30	....	....	....	....	Includes a sealing coat.
Bituminous concrete paving	5-inch concrete	1½-inch surface	1	1.23	1.23	1.23	....	....	....	....	....	....	....	....	....	....	....	....	Does not include a paint coat or a sealing coat.
Bituminous concrete paving	6-inch concrete	1½-inch surface	1	1.34	1.34	1.34	....	....	....	....	....	....	....	....	....	....	....	....	Does not include a paint coat or a sealing coat.
Bituminous concrete paving	6-inch concrete	2 -inch surface	3	1.40	1.47	1.45	....	....	....	....	1	1.53	1.53	1.53	....	....	....	....	Does not include a paint coat or a sealing coat.
Bituminous concrete paving	6-inch concrete	2 -inch surface	2	1.40	1.53	1.47	....	....	....	....	....	....	....	....	....	....	....	....	Includes a paint coat.
Bituminous concrete paving	6-inch concrete	2 -inch surface	2	1.50	1.59	1.55	....	....	....	....	3	1.40	1.59	1.51	....	....	....	....	Includes a sealing coat.
Paint coat	....	....	5	.03	.10	.06	....	....	....	....	....	....	....	....	....	....	....	....	
Sealing coat	....	....	6	.09	.12	.10	....	....	....	....	1	.06	.06	.06	....	....	....	....	
Vitrified block paving	4-inch concrete	Cement	9	1.79	2.18	1.95	....	....	....	....	3	2.06	2.20	2.15	....	....	....	....	
Vitrified block paving	5-inch concrete	Cement	....	....	....	....	....	....	....	....	1	2.25	2.25	2.25	....	....	....	....	
Vitrified block paving	6-inch concrete	Cement	25	1.95	2.30	2.09	24	1.94	2.50	2.21	23	2.14	2.45	2.24	14	2.15	2.55	2.29	
Vitrified block paving (Hillside)	4-inch concrete	Cement	2	1.93	2.02	1.98	....	....	....	....	2	2.06	2.22	2.14	....	....	....	....	
Vitrified block paving (Hillside)	6-inch concrete	Cement	....	....	....	....	....	....	....	....	4	2.20	2.40	2.28	....	....	....	....	
Granite block paving	4-inch concrete	Cement	4	2.97	3.39	3.08	....	....	....	....	....	....	....	....	....	....	....	....	
Granite block paving	6-inch concrete	Cement	11	3.09	3.49	3.32	10	3.12	3.65	3.30	4	3.20	3.50	3.39	5	3.42	3.90	3.70	
Granite block paving	6-inch concrete	Bituminous	6	3.17	3.50	3.32	10	3.17	3.77	3.46	11	3.43	3.80	3.62	10	3.45	3.75	3.60	
Creosote wood block	6-inch concrete	Sand	....	....	....	....	....	....	....	....	1	3.05	3.05	3.05	1	3.05	3.05	3.05	
Creosote wood block	6-inch concrete	Bituminous	2	2.86	3.50	3.18	1	3.00	3.00	3.00	....	....	....	....	1	3.25	3.25	3.25	
Creosote wood block liners	6-inch concrete	Bituminous	....	....	....	....	19	2.85	3.50	3.20	....	....	....	....	10	3.18	3.80	3.33	
Vitrified block gutters	4-inch concrete	Cement	5	2.00	2.35	2.18	....	....	....	....	2	2.00	2.20	2.10	....	....	....	....	
Vitrified block gutters	5-inch concrete	Cement	....	....	....	....	....	....	....	....	1	2.25	2.25	2.25	....	....	....	....	
Vitrified block gutters	6-inch concrete	Cement	17	2.10	2.45	2.24	....	....	....	....	19	2.00	2.50	2.24	....	....	....	....	
Vitrified block repaved	4-inch concrete	Cement	2	.95	1.36	1.15	....	....	....	....	....	....	....	....	....	....	....	....	Price computed.
Vitrified block repaved	5-inch concrete	Cement	2	.86	1.08	.97	....	....	....	....	....	....	....	....	....	....	....	....	Price computed.
Vitrified block repaved	6-inch concrete	Cement	8	1.00	1.63	1.18	2	1.18	1.20	1.19	10	1.00	1.60	1.30	2	1.00	1.00	1.00	Price computed.
Granite block repaved	4-inch concrete	Cement	1	1.16	1.16	1.16	....	....	....	....	....	....	....	....	....	....	....	....	Price computed.
Granite block repaved	6-inch concrete	Sand	....	....	....	....	....	....	....	....	2	1.05	1.18	1.12	1	1.05	1.05	1.05	Price computed.
Granite block repaved	6-inch concrete	Cement	4	1.10	1.55	1.27	5	1.18	2.10	*1.48	....	....	....	....	....	....	....	....	
Granite block repaved	6-inch concrete	Bituminous	2	1.25	1.46	1.36	1	1.65	1.65	1.65	3	1.18	1.33	1.25	....	....	....	....	
Granite block reeled and repaved	6-inch concrete	Cement	....	....	....	....	1	2.00	2.00	2.00	....	....	....	....	....	....	....	....	Price computed.
Granite block redressed and repaved	6-inch concrete	Cement	....	....	....	....	....	....	....	....	1	2.60	2.60	2.60	....	....	....	....	
Granite block redressed and repaved	6-inch concrete	Bituminous	....	....	....	....	....	....	....	....	2	2.38	2.77	2.58	2	2.10	2.35	2.23	
Armored concrete curb and circles, per linear foot	....	....	38	.55	.75	.62	....	....	....	....	29	.53	.70	.62	....	....	....	....	
Grading per cubic yard	....	....	40	.45	1.25	.79	29	.50	1.25	.88	29	.55	1.40	† .92	23	.70	1.42	1.07	
Concrete in place, per cubic yard	....	....	41	2.50	6.50	4.83	41	2.50	6.50	4.83	29	3.00	6.00	5.11	29	3.00	6.00	5.11	

*The bid of $3.50 on Contract No. 16 was not used in figuring this item, as it was evidently an error on the part of the bidder.

†The bid of 28 cents on Contract No. 75 was not used in figuring this item, as this bid was for a large quantity of heavy grading.

make a stricter inspection and, therefore, turn out a correspondingly amount of better workmanship.

One of the first acts of the Commission was to select from the City Engineer's office engineers and inspectors of experience, who had been in the service of the city for a number of years, as a nucleus around which we could gather and organize an expert corps. We believe that we have succeeded in doing this and as time goes on and our paving plan advances they should become more expert in their work and, therefore, produce even better results.

Washington City is probably the best paved one in the United States. Detroit, Mich., is probably ranked as second. The inspection system of the former is thirty-five years old, and that of the latter ten years old. To substantiate this I quote the following from A. W. Dow's report to the Paving Commission under date of April 30, 1913:

> In comparison with the work done in other cities, your work is far above the average. The inspection systems in other cities are much older. The inspection system in Detroit is ten years old, and in Washington, D. C., it has been in existence since 1876, and the contractors there know what is expected by those cities and the inspectors are all trained now in the work. Detroit and Washington come first, and Baltimore would come near third.

During an investigation last spring nothing startling developed, although the work of a few contractors was found to be a little under the specifications in some cases. In each case, however, an amount of money equal to the shortage was deducted from the respective contractors' estimates, the city losing absolutely nothing.

Our plant inspection was fully described in the 1912 report. The system is practically the same, so that we see no reason for repeating an outline of it.

Contracts to the number of thirty-one were awarded during the year, a total of seventy-three from the inception of the Commission's work to December 31, 1913. The 1913 contracts run from $5,712 to $132,886 in order to attract bidders of both large and small capital, which is the usual policy of the Commission.

We are attaching Table B, showing the amount of work completed during 1912 and 1913 and the amount of work left uncompleted which was contracted for during these years. This table also shows the total yardage contracted for from the inception of the Commission to January 1, 1914. It includes contracts to the amount of $2,601,793.28, which have been contracted for since the inception of the Commission. Of this amount contracts to the value of $356,120.56 remain uncompleted on December 31, 1913, and are, therefore, carried over to the year 1914.

DISBURSEMENTS.

Our disbursements for the year are explained in the attached statements, which have been checked by the City Comptroller. That official has also been furnished with a more detailed statement showing disbursements during the year, and all accounts have been audited by the Baltimore Audit Company to the close of business December 31, 1913.

You will note that a total of $1,527,653.79 was expended during the year 1913. Taking into consideration, however, our December estimates, which were paid in 1914, and the retained percentages on the 1913 work, which will be paid in 1914, less December, 1912, estimates and retained percentages on 1912 work paid in 1913, the financial value of the work done during the current year was $1,378,678.07. The cost of engineering, surveys and inspection during the year was 4 per cent. of this amount. This includes considerable advance work of surveys and plans for 1914 work.

Again, taking into consideration all overhead expenses for 1913, such as administrative salaries, construction salaries, testing material, incidental expenses, including the four clerks in

TABLE B.—RECAPITULATION OF QUANTITIES OF PAVING CONTRACTED FOR FROM THE INCEPTION OF THE PAVING COMMISSION TO DECEMBER 31, 1913.

Kind of Paving.	Base.	Wearing Surface or Filler.	Paving Completed During 1912.								Paving Completed During 1913.								Total Paving Completed to December 31, 1913.								Paving Under Contract, But Not Completed to December 31, 1913.								Total Paving Awarded and Assigned to December 31, 1913.							
			Lengths of Sovereign Paving.		City Area.		Railway Area.		Combined Areas.		Lengths of Sovereign Paving.		City Area.		Railway Area.		Combined Areas.		Lengths of Sovereign Paving.		City Area.		Railway Area.		Combined Areas.		Lengths of Sovereign Paving.		City Area.		Railway Area.		Combined Areas.		Lengths of Sovereign Paving.		City Area.		Railway Area.		Combined Areas.	
			Feet.	Miles.	Miles Av'g 30 Ft Wide	Area Square Yds.	Miles Av'g 30 Ft Wide	Area Square Yds.	Miles Av'g 30 Ft Wide	Area Square Yds.	Feet.	Miles.	Miles Av'g 30 Ft Wide	Area Square Yds.	Miles Av'g 30 Ft Wide	Area Square Yds.	Miles Av'g 30 Ft Wide	Area Square Yds.	Feet.	Miles.	Miles Av'g 30 Ft Wide	Area Square Yds.	Miles Av'g 30 Ft Wide	Area Square Yds.	Miles Av'g 30 Ft Wide	Area Square Yds.	Feet.	Miles.	Miles Av'g 30 Ft Wide	Area Square Yds.	Miles Av'g 30 Ft Wide	Area Square Yds.	Miles Av'g 30 Ft Wide	Area Square Yds.	Feet.	Miles.	Miles Av'g 30 Ft Wide	Area Square Yds.	Miles Av'g 30 Ft Wide	Area Square Yds.	Miles Av'g 30 Ft Wide	Area Square Yds.
Sheet asphalt paving	Cobble and concrete	1½-inch topping	8,005.75	1.52	1.98	34,752.20			1.98	34,752.20									8,005.75	1.52	1.98	34,752.20			1.98	34,752.20									8,005.75	1.52	1.98	34,752.20			1.98	34,752.20
Sheet asphalt paving	Cobble and concrete	2-inch topping	23,602.58	4.47	5.33	93,869.24			5.33	93,869.24	11,509.05	2.18	2.76	48,571.67			2.76	48,571.67	35,111.63	6.65	8.09	142,440.91			8.09	142,440.91									35,111.63	6.65	8.09	142,440.91			8.09	142,440.91
	Totals, cobble and concrete		31,608.33	5.99	7.31	128,621.44			7.31	128,621.44	11,509.05	2.18	2.76	48,571.67			2.76	48,571.67	43,117.38	8.17	10.07	177,193.11			10.07	177,193.11									43,117.38	8.17	10.07	177,193.11			10.07	177,193.11
Sheet asphalt paving	4-inch concrete	1½-inch topping	3,084.45	.59	.38	6,764.80	.03	504.25	.41	7,269.05									3,084.45	.59	.38	6,764.80	.03	504.25	.41	7,269.05									3,084.45	.59	.38	6,764.80	.03	504.25	.41	7,269.05
Sheet asphalt paving	4-inch concrete	2-inch topping	5,162.33	.98	.90	15,664.17	.02	475.90	.92	16,140.07	929.65	.17	.17	2,981.10			.17	2,981.10	6,091.98	1.15	1.06	18,645.27	.03	475.90	1.09	19,121.17									6,091.98	1.15	1.06	18,645.27	.03	475.90	1.09	19,121.17
	Totals, 4-inch concrete		8,246.78	1.57	1.28	22,428.97	.05	980.15	1.33	23,409.12	929.65	.17	.17	2,981.10			.17	2,981.10	9,176.43	1.74	1.44	25,410.07	.06	980.15	1.50	26,390.22									9,176.43	1.74	1.44	25,410.07	.06	980.15	1.50	26,390.22
Sheet asphalt paving	5-inch concrete	1½-inch topping									1,057.85	.20	.25	4,500.60			.25	4,500.60	1,057.85	.20	.25	4,500.60			.25	4,500.60									1,057.85	.20	.25	4,500.60			.25	4,500.60
Sheet asphalt paving	6-inch concrete	1-inch topping									2,192.60	.41	.50	8,828.50			.50	8,828.50	2,192.60	.41	.50	8,828.50			.50	8,828.50									2,192.60	.41	.50	8,828.50			.50	8,828.50
Sheet asphalt paving	6-inch concrete	1½-inch topping	488.45	.09	.07	1,289.30	.07	1,116.70	.14	2,406.00	22,702.89	4.30	3.97	69,744.75	.21	3,710.74	4.18	73,455.49	23,191.34	4.39	4.04	71,034.05	.28	4,827.44	4.32	75,861.49	14,699.00	2.78	2.57	45,345.00	.17	3,000.00	2.74	48,345.00	37,890.34	7.17	6.61	116,379.05	.45	7,827.44	7.06	124,206.49
Sheet asphalt paving	6-inch concrete	2-inch topping	19,235.65	3.64	3.29	57,962.78	.21	3,616.44	3.50	61,579.22	22,256.25	4.22	3.74	65,745.65	.52	9,266.42	4.26	75,012.07	41,491.90	7.86	7.04	123,708.43	.72	12,882.80	7.76	136,591.29									41,491.90	7.86	7.04	123,708.43	.72	12,882.86	7.76	136,591.29
	Totals, 6-inch concrete		19,724.10	3.73	3.36	59,252.08	.28	4,733.14	3.64	63,985.22	47,151.74	8.93	8.21	144,318.90	.73	12,977.16	8.94	157,296.06	66,875.84	12.66	11.58	203,570.98	1.00	17,710.30	12.58	221,281.28	14,699.00	2.78	2.57	45,345.00	.17	3,000.00	2.74	48,345.00	81,574.84	15.44	14.15	248,915.98	1.17	20,710.30	15.32	269,626.28
Sheet asphalt paving........................	8-inch concrete	1½-inch topping																									3,010.00	.57	.68	12,000.00			.68	12,000.00	3,010.00	.57	.68	12,000.00			.68	12,000.00
Total of all sheet asphalt paving			59,579.21	11.29	11.95	210,302.49	.33	5,713.29	12.28	216,015.78	60,648.29	11.48	11.39	200,372.27	.73	12,977.16	12.12	213,349.43	120,227.50	22.77	23.34	410,674.76	1.06	18,690.45	24.40	429,365.21	17,709.00	3.35	3.25	57,345.00	.17	3,000.00	3.42	60,345.00	137,936.50	26.12	26.59	468,019.76	1.23	21,690.45	27.82	489,710.21
Bituminous concrete paving	Cobble and concrete	1½-inch surface	342.50	.06	.09	1,570.04			.09	1,570.04									342.50	.06	.09	1,570.04			.09	1,570.04									342.50	.06	.09	1,570.04			.09	1,570.04
Bituminous concrete paving	Cobble and concrete	2½-inch surface									7,156.85	1.36	1.35	23,877.16			1.35	23,877.16	7,156.85	1.36	1.35	23,877.10			1.35	23,877.10									7,156.85	1.36	1.35	23,877.16			1.35	23,877.16
	Totals, cobble and concrete		342.50	.06	.09	1,570.04			.09	1,570.04	7,156.85	1.36	1.35	23,877.16			1.35	23,877.16	7,499.35	1.42	1.44	25,447.20			1.44	25,447.20									7,499.35	1.42	1.44	25,447.20			1.44	25,447.20
Bituminous concrete paving	4-inch concrete	2-inch surface	3,608.10	.69	.79	14,021.75			.79	14,021.75	5,112.88	.96	1.17	20,410.19	.00	8.70	1.17	20,418.89	8,720.98	1.65	1.96	34,431.94	.00	8.70	1.96	34,440.64									8,720.98	1.65	1.96	34,431.94	.00	8.70	1.96	34,440.64
Bituminous concrete paving	5-inch concrete	1½-inch surface									614.95	.12	.10	1,750.59			.10	1,750.59	614.95	.12	.10	1,750.59			.10	1,750.59									614.95	.12	.10	1,750.59			.10	1,750.59
Bituminous concrete paving	6-inch concrete	1½-inch surface									130.45	.03	.02	397.62			.02	397.62	130.45	.03	.02	397.62			.02	397.62									130.45	.03	.02	397.62			.02	397.62
Bituminous concrete paving	6-inch concrete	2-inch surface									998.15	.19	.23	4,018.13			.23	4,018.13	998.15	.19	.23	4,018.13			.23	4,018.13									998.15	.19	.23	4,018.13			.23	4,018.13
Bituminous concrete paving*	6-inch concrete	2-inch surface	107.70	.04	.04	700.00			.04	700.00	2,993.25	.56	.69	12,112.16	.00	22.25	.69	12,134.41	3,190.95	.60	.73	12,812.16	.00	22.25	.73	12,834.41	3,552.00	.67	.82	14,450.00	.01	150.00	.83	14,600.00	6,742.95	1.27	1.55	27,262.16	.01	172.25	1.56	27,434.41
	Totals, 6-inch concrete		107.70	.04	.04	700.00			.04	700.00	4,121.85	.78	.94	16,527.91	.00	22.25	.94	16,550.16	4,319.55	.82	.98	17,227.91	.00	22.25	.98	17,250.16	3,552.00	.67	.82	14,450.00	.01	150.00	.83	14,600.00	7,871.55	1.49	1.80	31,657.91	.01	172.25	1.81	31,830.16
Total of all bituminous concrete paving			4,148.30	.79	.92	16,291.79			.92	16,291.79	17,006.53	3.22	3.56	62,565.85	.00	30.95	3.56	62,596.80	21,154.83	4.01	4.48	78,857.64	.00	30.95	4.48	78,888.59	3,552.00	.67	.82	14,450.00	.01	150.00	.83	14,600.00	24,706.83	4.68	5.30	93,307.64	.01	180.95	5.31	93,488.59
Vitrified block paving	4-inch concrete	Cement	2,325.00	.44	.47	8,324.47			.47	8,324.47	740.85	.14	.10	1,749.36			.10	1,749.36	3,065.85	.58	.57	10,073.83			.57	10,073.83	210.00	.04	.03	530.00			.03	530.00	3,275.85	.62	.60	10,603.83			.60	10,603.83
Vitrified block paving	5-inch concrete	Cement									108.00	.02	.01	147.30			.01	147.30	108.00	.02	.01	147.30			.01	147.30									108.00	.02	.01	147.30			.01	147.30
Vitrified block paving	6-inch concrete	Cement	21,487.70	4.07	2.98	52,426.26	1.54	27,253.61	4.52	70,679.87	39,473.11	7.48	6.08	107,092.73	2.66	46,696.30	8.74	153,789.03	60,960.81	11.55	9.06	159,518.99	4.20	73,949.91	13.26	233,468.90	4,227.45	.80	.78	13,640.00	.51	8,990.00	1.29	22,630.00	65,188.26	12.35	9.84	173,158.99	4.71	82,939.91	14.55	256,098.90
Vitrified block paving	Sand base	Cement									63.70	.01	.01	177.33			.01	177.33	63.70	.01	.01	177.33			.01	177.33									63.70	.01	.01	177.33			.01	177.33
Total of all vitrified block paving			23,812.70	4.51	3.45	60,750.73	1.54	27,253.61	4.99	88,004.34	40,385.66	7.65	6.20	109,166.72	2.66	46,696.30	8.86	155,863.02	64,198.36	12.16	9.65	169,917.45	4.20	73,949.91	13.85	243,867.36	4,437.45	.84	.81	14,170.00	.51	8,990.00	1.32	23,160.00	68,635.81	13.00	10.46	184,087.45	4.71	82,939.91	15.17	267,027.36
Granite block paving	4-inch concrete	Cement	2,973.44	.56	.65	11,348.27			.65	11,348.27									2,973.44	.56	.65	11,348.27			.65	11,348.27									2,973.44	.56	.65	11,348.27			.65	11,348.27
Granite block paving	6-inch concrete	Cement	5,922.63	1.12	.98	17,252.45	.44	7,715.05	1.42	24,967.50	13,393.80	2.54	2.72	47,816.85	.61	10,769.74	3.33	58,586.59	19,316.43	3.66	3.70	65,069.30	1.05	18,484.70	4.75	83,554.00	140.00	.03	.03	500.00	.43	7,550.00	.46	8,050.00	19,456.43	3.69	3.73	65,569.30	1.48	26,034.79	5.21	91,604.09
Granite block paving	6-inch concrete	Bituminous	1,830.45	.35	.32	5,669.47	.01	106.94	.33	5,776.41	6,433.92	1.22	1.07	18,988.75	1.09	19,116.11	2.16	38,104.86	8,264.37	1.57	1.39	24,658.22	1.10	19,223.05	2.40	43,881.27	2,837.45	.53	.58	10,130.00	.30	5,395.00	.88	15,525.00	11,101.82	2.10	1.97	34,788.22	1.40	24,618.05	3.37	59,406.27
	Totals, 6-inch concrete		7,753.08	1.47	1.30	22,921.92	.45	7,821.99	1.75	30,743.91	19,827.72	3.76	3.79	66,805.60	1.70	29,885.85	5.49	96,691.45	27,580.80	5.23	5.09	89,727.52	2.15	37,707.84	7.24	127,435.36	2,977.45	.56	.61	10,630.00	.73	12,945.00	1.34	23,575.00	30,558.25	5.79	5.70	100,357.52	2.88	50,652.84	8.58	151,010.36
Total of all granite block paving			10,726.52	2.03	1.95	34,270.19	.45	7,821.99	2.40	42,092.18	10,827.72	3.76	3.79	66,805.60	1.70	29,885.85	5.49	96,691.45	30,554.24	5.79	5.74	101,075.79	2.15	37,707.84	7.89	138,783.63	2,977.45	.56	.61	10,630.00	.73	12,945.00	1.34	23,575.00	33,531.69	6.35	6.35	111,705.79	2.88	50,652.84	9.23	162,358.63

*Bituminous concrete paving with a sealing coat.

TABLE B.—Continued—RECAPITULATION OF QUANTITIES OF PAVING CONTRACTED FOR FROM THE INCEPTION OF THE PAVING COMMISSION TO DECEMBER 31, 1913.

Kind of Paving	Base	Wearing Surface or Filler	Paving Completed During 1912.								Paving Completed During 1913.								Total Paving Completed to December 31, 1913.								Paving Under Contract, But Not Completed to December 31, 1913.								Total Paving Awarded and Assigned to December 31, 1913.							
			Lengths of Sovereign Paving.		City Area.		Railway Area.		Combined Areas.		Lengths of Sovereign Paving.		City Area.		Railway Area.		Combined Areas.		Lengths of Sovereign Paving.		City Area.		Railway Area.		Combined Areas.		Lengths of Sovereign Paving.		City Area.		Railway Area.		Combined Areas.		Lengths of Sovereign Paving.		City Area.		Railway Area.		Combined Areas.	
			Feet	Miles.	Miles Av'g 30 Ft Wide	Area Square Yds	Miles Av'g 30 Ft Wide	Area Square Yds	Miles Av'g 30 Ft Wide	Area Square Yds	Feet.	Miles.	Miles Av'g 30 Ft. Wide	Area Square Yds.	Miles Av'g 30 Ft Wide	Area Square Yds	Miles Av'g 30 Ft Wide.	Area Square Yds	Feet.	Miles.	Miles Av'g 30 Ft Wide	Area Square Yds	Miles Av'g 30 Ft Wide	Area Square Yds.	Miles Av'g 30 Ft Wide	Area Square Yds	Feet.	Miles.	Miles Av'g 30 Ft Wide	Area Square Yds	Miles Av'g 30 Ft Wide	Area Square Yds.	Miles Av'g 30 Ft Wide	Area Square Yds	Feet.	Miles.	Miles Av'g 30 Ft Wide	Area Square Yds.	Miles Av'g 30 Ft Wide	Area Square Yds	Miles Av'g 30 Ft Wide	Area Square Yds
Creosote wood block paving	6-inch concrete	Sand									554.20	.10	.10	1,703.22	.00	47.65	.10	1,750.87	554.20	.10	10	1,703.22	.00	47.65	.10	1,750.87									554.20	.10	10	1,703.22	.00	47.65	10	1,750.87
Creosote wood block paving	6-inch concrete	Bituminous					.08	1,389.40	08	1,389.40					05	859.32	05	850.32					.13	2,248.72	.13	2,248.72													.13	2,248.72	.13	2,248.72
	Totals, 6-inch concrete						08	1,389.40	08	1,389.40	554.20	10	.10	1,703.22	05	906.97	15	2,610.19	554.20	.10	10	1,703.22	.13	2,296.37	23	3,999.59									554.20	.10	10	1,703.22	13	2,296.37	23	3,999.59
Creosote wood block liners	4-inch concrete	Bitumen					01	173.05	01	173.05													01	173.05	.01	173.05													.01	173.05	01	173.05
Creosote wood block liners	6-inch concrete	[illegible]					.14	2,491.47	14	2,491.47					23	4,072.85	23	4,072.85					.37	6,564.32	.37	6,564.32					.07	1,265.00	.07	1,265.00					.44	7,829.32	44	7,829.32
Totals of all creosote wood block paving							23	4,053.92	23	4,053.92	554.20	.10	10	1,703.22	.28	4,979.82	38	6,683.04	554.20	.10	10	1,703.22	51	9,033.74	.61	10,736.96					07	1,265.00	.07	1,265.00	554.20	.10	10	1,703.22	58	10,298.74	68	12,001.96
Vitrified block gutters	4-inch concrete	Cement			07	1,217.06			07	1,217.06			.04	742.99			.04	742.99			.11	1,960.05			.11	1,960.05											11	1,960.05			11	1,960.05
Vitrified block gutters	5-inch concrete	[illegible]											00	50.80			00	50.80			00	50.80			00	50.80											00	50.80			00	50.80
Vitrified block gutters	6-inch concrete	[illegible]			39	6,974.58			39	6,974.58			96	16,721.53			96	16,721.53			1.35	23,696.11			1.35	23,696.11			42	7,440.00			.42	7,440.00			1.77	31,136.11			1.77	31,136.11
Totals of all vitrified block gutters					46	8,191.64			46	8,191.64			1.00	17,515.32			1.00	17,515.32			1.46	25,706.96			1.46	25,706.96			42	7,440.00			42	7,440.00			1.88	33,146.96			1.88	33,146.96
Vitrified block repaved	4-inch concrete		14.00	00	00	17.91			00	17.91	21.80	01	00	33.38			00	33.38	35.80	.01	00	51.29			00	51.29									35.80	01	.00	51.29			.00	51.29
Vitrified block repaved	5-inch concrete										64.90	01	01	110.77			01	110.77	64.90	01	01	110.77			01	110.77									64.90	.01	01	110.77			01	110.77
Vitrified block repaved	6-inch concrete		270.50	05	03	406.14	.00	1.03	03	407.17	198.00	.04	01	263.39	.00	11.07	.01	274.46	468.50	.09	04	669.53	00	12.10	04	681.63									468.50	.09	.04	669.53	00	12.10	.04	681.63
Totals of all vitrified block repaved			284.50	05	03	424.05	00	1.03	03	425.08	284.70	06	.02	407.54	00	11.07	02	418.61	569.20	11	05	831.59	00	12.10	05	843.69									569.20	11	.05	831.59	00	12.10	.05	843.69
Granite block repaved	4-inch concrete	Cement	336.00	.06	04	707.12			04	707.12									336.00	.06	04	707.12			.04	707.12									336.00	06	.04	707.12			04	707.12
Granite block repaved	6-inch concrete	Sand									11.80	00	01	146.85	.00	14.53	01	161.38	11.80	.00	.01	146.85	.00	14.53	.01	161.38									11.80	00	01	146.85	00	14.53	.01	161.38
Granite block repaved	6-inch concrete	Cement					00	32.96	00	32.96	14.00	00	00	78.70	.13	2,312.11	13	2,390.81	14.00	.00	00	78.70	.13	2,345.07	.13	2,423.77									14.00	.00	00	78.70	.13	2,345.07	13	2,423.77
Granite block repaved	6-inch concrete	Bituminous									87.75	.02	.02	393.85	02	367.32	.04	761.17	87.75	02	02	393.85	02	367.32	04	761.17									87.75	02	02	393.85	.02	367.32	04	761.17
Granite block reeled and repaved	6-inch concrete	Cement					.05	861.00	05	861.00													.05	861.00	05	861.00													05	861.00	05	861.00
Granite block redressed and repaved	6-inch concrete	Cement																									404.00	.08	12	2,150.00	01	110.00	.13	2,260.00	404.00	.08	.12	2,150.00	01	110.00	13	2,260.00
Granite block redressed and repaved	6-inch concrete	Bituminous									1,794.20	34	21	3,651.00	.08	1,358.70	29	5,009.70	1,794.20	34	21	3,651.00	.08	1,358.70	29	5,009.70	1,195.10	.23	20	3,470.00	.07	1,150.00	27	4,620.00	2,989.30	.57	.41	7,121.00	15	2,508.70	.56	9,629.70
	Totals, 6-inch concrete						.05	893.96	05	893.96	1,907.75	.36	24	4,270.40	23	4,052.66	47	8,323.06	1,907.75	.36	24	4,270.40	.28	4,946.62	52	9,217.02	1,599.10	31	32	5,620.00	08	1,260.00	40	6,880.00	3,506.85	.67	56	9,890.40	.36	6,206.62	92	16,097.02
Totals of all granite block repaved			336.00	.06	04	707.12	05	893.96	.09	1,601.08	1,907.75	36	.24	4,270.40	23	4,052.66	.47	8,323.06	2,243.75	.42	.28	4,977.52	.28	4,946.62	.56	9,924.14	1,599.10	31	32	5,620.00	.08	1,260.00	40	6,880.00	3,842.85	73	60	10,597.52	36	6,206.62	.96	16,804.14
Total of all paving	Cobble and concrete		31,950.83	6.05	7.40	130,191.48			7.40	130,191.48	18,665.90	3.54	4.11	72,448.83			4.11	72,448.83	50,616.73	9.59	11.51	202,640.31			11.51	202,640.31									50,616.73	9.59	11.51	202,640.31			11.51	202,640.31
Totals of all paving	4-inch concrete		17,503.32	3.32	3.30	58,065.55	.06	1,153.20	3.36	59,218.75	6,805.18	1.28	1.48	25,917.02	.00	8.70	1.48	25,925.72	24,308.50	4.60	4.77	83,982.57	.07	1,161.90	4.84	85,144.47	210.00	.04	.03	530.00			.03	530.00	24,518.50	4.64	4.80	84,512.57	.07	1,161.90	4.87	85,674.47
Totals of all paving	5-inch concrete										1,845.70	35	37	6,560.06			37	6,560.06	1,845.70	35	37	6,560.06			37	6,560.06									1,845.70	35	37	6,560.06			37	6,560.06
Totals of all paving	6-inch concrete		40,433.08	9.36	8.10	142,680.98	2.54	44,584.60	10.64	187,265.58	113,234.37	21.45	20.33	357,703.68	5.60	98,625.11	25.93	456,328.79	162,667.45	30.81	28.44	500,384.66	8.13	143,209.71	36.57	643,594.37	27,055.00	5.12	5.52	97,125.00	1.57	27,610.00	7.09	124,735.00	189,722.45	35.93	33.96	597,509.66	9.70	170,819.71	43.66	768,329.37
Totals of all paving	8-inch concrete																										3,010.00	57	.68	12,000.00			68	12,000.00	3,010.00	57	.68	12,000.00			.68	12,000.00
Total of all paving	Sand base										63.70	01	01	177.33			01	177.33	63.70	01	01	177.33			01	177.33									63.70	01	01	177.33			01	177.33
Totals of all paving combined			98,887.23	18.73	18.80	330,938.01	2.60	45,737.80	21.40	376,675.81	140,614.85	26.63	26.30	462,806.92	5.60	98,633.81	31.90	561,440.73	239,502.08	45.36	45.10	793,744.93	8.20	144,371.61	53.30	938,116.54	30,275.00	5.73	6.23	109,655.00	1.57	27,610.00	7.80	137,265.00	269,777.08	51.09	51.33	903,399.93	9.77	171,981.61	61.10	1,075,381.54

NOTE Where it was planned to lay sheet asphalt and bituminous [illegible] over the cobble surface, it was found necessary to remove a large portion of this cobble and replace with a concrete base This concrete was paid for by the cubic yard

the Appeal Tax Court for collecting the paving tax, these expenses to date amount to 5.59 per cent. of the total amount of work done. This includes the amount paid per diem inspectors during the year, but which was charged to improved paving, as per financial statement. All overhead expenses from the inception of the Commission's work to December 31, 1913, amount to 5.35 per cent. of the total value of work done.

Attached herewith are: Table No. 1, showing the personnel of the Administrative Department; Table No. 2, showing the personnel of the Engineering Department; Table No. 3, showing statement of contracts awarded, status of work, areas of work and all necessary information relating thereto; Table No. 4, showing mileage and areas of all pavements in the city, corrected to December 31, 1913; also map showing streets paved with improved paving to December 31, 1913.

Respectfully submitted,

R. KEITH COMPTON,
Chairman and Consulting Engineer.

JAMES H. PRESTON,
Mayor, Ex officio.

DOUGLAS H. THOMAS,
ALFRED E. BOOTH,
LEONIDAS G. TURNER,
SAMUEL C. ROWLAND,

J. MYERS HEDIAN, *Secretary.*

Financial Statement.

Appropriations and Expenses for the Year 1913.

Appropriation, administrative salaries	$11,180 00
Total expenditures	11,068 54
Surplus of credit	$111 46
Balance to 1951 Loan	111 46

Appropriation, construction salaries	$52,600 00
Total expenditures	51,915 47
Surplus of credit	$684 53
Balance to 1951 Loan	684 53

Appropriation, expenses		$1,900 00

Expenditures.

Stamps and postal cards	$100 34	
Printing and stationery supplies	257 99	
Bond of bookkeeper ($3,000)	7 50	
Office furniture	266 50	
Telegrams, express charges and newspapers	24 02	
Subscriptions to periodicals	4 50	
Telephone rental and toll messages	62 21	
Affidavits	95	
Expenses of inspection trips	59 00	
Maps	25 75	
Directory	7 00	
Service of temporary stenographer	16 00	
Total		831 76
Surplus of credit		$1,068 24
Balance to 1951 Loan		1,068 24

Appropriation, testing materials		$10,000 00

EXPENDITURES.

Salaries	$3,433 30	
Municipal Laboratory—Sheet asphalt and bituminous concrete inspections, including equipment for laboratory	6,537 24	
Total		9,970 54
Surplus of credit		$29 46
Balance to 1951 Loan		29 46

Appropriation, improved paving	$924,320 00
Amount brought forward from 1912	830,133 60
Amount received from other sources, per statement to City Comptroller	43,270 48
Received account special paving tax (1913)	62,317 76
Total credits	$1,860,041 84

EXPENDITURES.

Amounts paid on contracts as follows:

No. 4—F. E. Schneider Paving Co.	$400 00	
No. 6—Elder Paving and Contracting Co.	30,509 81	
No. 7—P. Flanigan & Sons	30,103 65	
No. 8—Filbert Paving and Constr. Co.	64,399 27	
No. 10—David M. Andrew Co.	11,992 42	
No. 11—N. A. Middleton & Co.	500 00	
No. 12—N. A. Middleton & Co.	6,309 14	
No. 14—Warner-Quinlan Asphalt Co.	49,369 70	
No. 15—Warner-Quinlan Asphalt Co.	24,479 10	
No. 16—Warner-Quinlan Asphalt Co.	79,704 01	
No. 17—Cunningham Pav. and Constr. Co.	28,389 67	
No. 20—Filbert Paving and Constr. Co.	16,935 41	
No. 24—P. F. Reddington	7,016 18	
No. 26—Martin J. Beach	70,591 26	
No. 27—John E. Quinn	37,960 72	
No. 29—Cunningham Pav. and Constr. Co.	7,152 80	
No. 30—P. F. Reddington	1,002 43	
Amounts carried forward	$466,815 57	$1,860,041 84

Amounts brought forward	$466,815 57	$1,860,041 84
No. 31—F. E. Schneider Paving Co.	20,106 08	
No. 32—U. S. Asphalt Refining Co.	41,801 61	
No. 33—Consolidated Engineering Co.	13,905 97	
No. 34—Cunningham Pav. and Constr. Co.	37,455 98	
No. 35—P. F. Reddington	17,202 12	
No. 36—Cunningham Pav. and Constr. Co.	13,697 16	
No. 37—Elder Paving and Contracting Co.	12,961 94	
No. 38—George Long Contracting Co.	34,666 12	
No. 39—George Long Contracting Co.	14,958 82	
No. 40—Standard Contracting Co.	27,194 02	
No. 41—Filbert Paving and Constr. Co.	15,204 61	
No. 42—P. F. Reddington	31,603 47	
No. 43—Martin J. Beach	33,000 40	
No. 44—F. E. Schneider Paving Co.	75,200 76	
No. 45—P. Flanigan & Sons	18,370 68	
No. 46—P. F. Reddington	14,215 55	
No. 47—Field, Barker & Underwood	22,469 80	
No. 48—George Long Contracting Co.	19,150 36	
No. 49—P. Flanigan & Sons	17,209 75	
No. 50—P. Flanigan & Sons	59,296 26	
No. 51—F. E. Schneider Paving Co.	44,882 01	
No. 52—Thomas Mullan	18,767 88	
No. 53—P. F. Reddington	40,166 80	
No. 54—Eastern Paving Co.	17,225 42	
No. 55—P. F. Reddington	14,374 36	
No. 56—Eastern Paving Co.	6,649 52	
No. 57—Martin J. Beach	28,252 98	
No. 58—Standard Contracting Co.	14,434 64	
No. 59—Standard Contracting Co.	13,451 25	
No. 60—John E. Quinn	26,541 07	
No. 62—Balto. Asphalt Block and Tile Co.	55,661 11	
No. 63—Filbert Paving and Constr. Co.	42,812 37	
No. 64—Balto. Asphalt Block and Tile Co.	4,166 08	
No. 65—Southern Paving Construction Co.	15,949 20	
No. 66—Patrick F. Reddington	....	
No. 67—Southern Paving Construction Co.	16,051 20	
No. 68—John E. Quinn	2,072 00	
No. 69—George Long Contracting Co.	4 269 51	
No. 70—Southern Paving Construction Co.	2,378 40	
No. 71—Balto. Asphalt Block and Tile Co.	15,081 51	
Amounts carried forward	$1,389,675 34	$1,860,041 84

Amounts brought forward	$1,389.675 34	$1,860,041 84
Work done by City Engineer's day labor forces:		
Group A—		
Mason alley, Lafayette avenue to Mosher street	1,021 12	
Group B—		
Hollingsworth street, Lombard street to Pratt street	3,930 69	
Grant street, Pratt street to Water street	4,436 91	
Ellicott street, Pratt street to Lombard street	3.543 56	
Salaries, per diem inspectors	3,233 00	
Advertising	2,046 70	
Printing and stationery supplies	951 78	
Car fare (Engineering Department)	881 85	
Blue prints	60 41	
Additional service	155 50	
Postage (Engineering Department)	69 55	
One Burroughs adding machine	319 25	
One Underwood typewriter	83 03	
Freight and drayage	35 28	
Photographs and maps	170 02	
Engineers' supplies, furniture and drawing materials	1,124 25	
Bonding employees	32 50	
Extra toll service	3 90	
Overcharge for testing and overtime for inspectors	36 60	
Motor—Current and accessories (City Yard).	638 54	
Rental of lot for storing cobble	75 00	
Dow & Smith (inspection expenses)	830 15	
Traveling expenses and meals	201 28	
Stenographic services in connection with the Houston-Padgett mortgage case, April 30, 1913	103 50	
One Studebaker sprinkler and cost of operating same during 1913	825 95	
For cutting and hauling granite blocks	392 17	
Amounts carried forward	$1,414.877 83	$1,860,041 84

Amounts brought forward		$1,414,877 83	$1,860,041 84
Excavating in railway area of United Railways and Electric Company		481 34	
Paving around lamp holes, account Consolidated Gas Electric Light and Power Co.		24 93	
Changing hydrants and adjusting manholes.		3,496 05	
Supplies for and maintenance of Cadillac touring car		1,201 90	
Supplies for and maintenance of Ford runabout		558 95	
City Engineer's Department:			
Inspection, curbing, repairs	$640 33		
Paving footways, cleaning streets, piling blocks, etc.	1,247 12		
Paving Old Ensor street	314 02		
Parking Bond street	6,705 41		
Adjusting manholes and inlets	9,177 41		
		18,084 29	
Extra work on contracts as follows:			
Nos. 4, 31 and 44	$948 38		
Nos. 6 and 37	811 00		
Nos. 8, 20 and 41	318 42		
Nos. 9 and 10	924 87		
Nos. 11 and 12	35 28		
Nos. 13, 17, 18, 34 and 36	1,701 90		
Nos. 14, 15 and 16	9,371 85		
No. 24	3 87		
No. 26	257 47		
No. 32	8 01		
Nos. 38 and 69	625 66		
No. 40	35 34		
No. 47	8 91		
No. 49	86 28		
No. 52	4 95		
		15,142 19	
Total			1,453,867 48
Surplus of credit			$406,174 36
Balance carried to 1914			406,174 36

Expenditures from the Inception of the Commission to December 31, 1913.

1911	$3,939 22
1912	633,060 76
1913	1,527,653 79
Total	$2,164,653 77

TABLE No. 1.

PERSONNEL OF ADMINISTRATIVE DEPARTMENT.

NAME.	Title.	Appointed.	REMARKS.
R. Keith Compton	*Chairman	May 31, 1911.	
James H. Preston	Mayor	....	Ex officio.
Douglas H. Thomas	Commissioner	May 31, 1911.	
Alfred E. Booth	Commissioner	May 31, 1911.	
Leonidas G. Turner	Commissioner	May 31, 1911.	
Samuel C. Rowland	Commissioner	May 31, 1911.	
J. Myers Hedian	Secretary	March 7, 1912.	
William F. Gies	Stenographer	March 15, 1912.	
W. Irving Bowie	Bookkeeper	February 26, 1913.	
Ignatius E. McKenna	File Clerk	September 16, 1912.	

*Appointed Consulting Engineer, June 27, 1913. (See personnel of Engineering Department.)

TABLE No. 2.

PERSONNEL OF ENGINEERING DEPARTMENT.

NAME.	Title.	Entered Service.	REMARKS.
R. Keith Compton	Consulting Engineer.	June 27, 1913	
L. J. Houston, Jr	Principal Assistant Engineer	January 15, 1912	Resigned February 1, 1913.
R. M. Cooksey	Principal Assistant Engineer	November 16, 1911	Promoted from Assistant Engineer, February 1, 1913.
Bruce Aldrich	Chief Asphalt Inspector	March 1, 1912	
F. K. Duncan	Assistant Engineer	November 16, 1911	
C. P. Nolan, Jr	Assistant Engineer	February 2, 1912	
B. L. Crozier	Assistant Engineer	July 18, 1912	
P. C. Painter	Assistant Engineer	June 12, 1912	
W. H. Smith	Assistant Engineer	June 1, 1912	
H. D. Williar, Jr	Assistant Engineer	April 22, 1912	
C. E. Bennett	Inspector	May 13, 1912	Died June 15, 1913.
William E. Bowles	Inspector	July 18, 1912	Furloughed January 5, 1913.
William T. Brewer	Inspector	August 22, 1912	
Harry C. Buckley	Inspector	September 30, 1912	Promoted from Rodman, January 1, 1913.
George P. Camalier	Inspector	December 5, 1911	
James R. Carroll	Inspector	November 26, 1912	
Robert A. Chambers	Inspector	August 26, 1912	
John J. Collins	Inspector	May 19, 1913	
Laurence Cotter	Inspector	December 16, 1912	Furloughed January 5, 1913.
Edward G. Cox	Inspector	August 7, 1913	

Thomas Davidson	Inspector	June 1, 1912	Promoted from Rodman, January 1, 1913.
Samuel Dinnis	Inspector	July 13, 1912	
John W. Farrell	Inspector	November 13, 1912	
George E. Finck	Inspector	November 16, 1911	Promoted from Draughtsman, March 16, 1913.
Robert A. Fisher	Inspector	September 9, 1912	Resigned April 15, 1913.
John J. Gallagher	Inspector	August 3, 1912	
Benjamin Grymes	Inspector	May 23, 1912	
B. H. Hanson	Inspector	May 20, 1912	Promoted from Rodman, April 1, 1913.
M. G. Harris	Inspector	May 7, 1913	
N. U. Hasson	Inspector	April 25, 1912	
F. J. Hayden	Inspector	June 3, 1912	
Lee E. Hedrick	Inspector	May 24, 1913	
Thomas Hines, Jr	Inspector	May 7, 1913	
Reginald G. Hobbs	Inspector	July 6, 1912	Promoted from Rodman, January 1, 1913.
William Hunt	Inspector	August 23, 1912	
Charles H. Kirby	Inspector	July 18, 1912	
William King	Inspector	October 28, 1912	
A. C. Knight	Inspector	November 17, 1911	
James H. McAfee	Inspector	May 10, 1913	
T. Harry Magee	Inspector	September 5, 1912	
Lewis Macher	Inspector	October 1, 1912	Furloughed January 15, 1913.
Pierce Marston	Inspector	August 15, 1912	
Leroy P. Mayes	Inspector	August 9, 1912	
James E. Murphy	Inspector	June 17, 1912	
John A. Murphy	Inspector	September 1, 1912	
Patrick Norton	Inspector	May 13, 1912	
William C. O'Keefe	Inspector	May 2, 1912	Furloughed November 26, 1913.
William A. O'Neill	Inspector	July 17, 1912	Relieved of duty November 1, 1913.

TABLE No. 2—*Continued.*

Personnel of Engineering Department.

Name.	Title.	Entered Service.	Remarks.
J. C. Parkinson	Inspector	November 1, 1912	
Walter F. Perkins	Inspector	July 27, 1912	Promoted from Rodman, June 11, 1913.
Samuel A. Pitt	Inspector	June 2, 1913	
David D. Porter	Inspector	April 1, 1913	Resigned June 1, 1913.
Edward B. Rebbert	Inspector	May 16, 1913	
Evan V. Rinehart	Inspector	July 1, 1912	Resigned February 1, 1913.
Irving M. Scott	Inspector	October 2, 1912	
J. C. Shryock	Inspector	May 13, 1912	
Arthur J. Smith	Inspector	October 16, 1912	Promoted from Sub-Inspector, May 1, 1913.
Henry M. Staylor	Inspector	September 16, 1912	
Joseph W. Thomas	Inspector	September 1, 1912	
John Thorne	Inspector	April 10, 1913	
John E. Ward	Inspector	June 17, 1912	Relieved of duty May 14, 1913.
William B. Waterman	Inspector	November 18, 1912	
Ambrose M. White	Inspector	October 9, 1912	
Albert Whiteley	Inspector	October 10, 1912	Promoted from Rodman, January 1, 1913.
William M. Youse	Inspector	October 17, 1912	
J. B. Brinton	Sub-Inspector	April 15, 1913	Resigned July 8, 1913.
Alan L. Campbell	Sub-Inspector	June 2, 1913	Furloughed November 5, 1913.
J. A. Schiavetti	Sub-Inspector	April 28, 1913	Resigned August 1, 1913.
Julian D. Sears	Sub-Inspector	May 28, 1913	Furloughed October 7, 1913.
William F. Gunkel	Rodman	November 4, 1912	

A. N. Satterfield	Rodman	July 31, 1912	
Guy Stollenwerck	Rodman	June 3, 1913	Furloughed October 1, 1913.
Paul V. Burwell	Draughtsman	August 20, 1913	
C. D. Clark	Draughtsman	November 25, 1912	Resigned May 1, 1913.
Charles S. Distefano	Draughtsman	July 27, 1912	Resigned January 1, 1913.
E. J. McIntyre	Draughtsman	October 9, 1912	Resigned January 10, 1913.
Roland G. Spedden	Draughtsman	May 2, 1913	
Ernest M. Will	Draughtsman	May 2, 1913	Resigned August 19, 1913.
Gustav J. Barrett	Stenog'r and Clerk	February 1, 1913	Transferred to Inspector, April 1, 1913; resigned May 15, 1913.
George M. Dersch	Stenog'r and Clerk	November 16, 1911	Resigned February 1, 1913.
Florence Solomon	Stenog'r and Clerk	April 1, 1913	

TABLE 3—STATEMENT OF LENGTHS, WIDTHS AND AREAS OF MATERIALS

Contract Number	Contractor	Assistant Engineer in Charge	Name of Improved Street.	From.	To.	Measurements.						Sheet Asphalt Paving.								Bituminous Concrete Paving.								Wood Block Paving.									Wood Block Liners		
						Width.	Length of Streets.		Lengths of Returns.		Miles Av'g 30 Ft Wide.	Name of Asphalt	Depth of Topping	City.			Railway.			Name of Asphalt	Depth of Surface	City.			Railway.			Name of Block.	City.				Railway.				Railway.		
						Feet.	Feet.	Miles.	Feet.	Miles				Base.	Area	Price.	Base.	Area.	Price.			Base.	Area	Price.	Base.	Area	Price.		Base.	Filler.	Area	Price.	Base	Filler.	Area	Price.	Base	Area	Price
1	F E Schneider Paving Co	Cooksey	Bolton st	N. C L. Hoffman st	S B L Lafayette ave	38 70	1,162 30	.22	107.95	.02	.30	California	1½"	Cobble	5,156.80	$0 80	4"	18.30	$1.42																		4"	11 00	
2	F. E. Schneider Paving Co.	Cooksey	Hoffman st	E B L Eutaw st	W side Park ave	39 07	1,012 85	.19	76.90	.01	.26	Bermudez	1½"	Cobble	4,501.30	.80																							
			Hoffman st	W B L Linden ave	E. B. L. Linden ave	39 10	59.80	.01	25.60	.00	.02	Bermudez	1½"	4"	226.50	1.42	4"	21.55	1.42																		4"	7 15	
			Hoffman st	W. side Park ave	W. B. L. Brevard st	39 33	241.25	.05	26.30	.01	.06	Bermudez	1½"	4"	1,021.60	1.42	4"	21.80	1.42																		4"	7 30	
	Total contract						1,313.90	.25	128.80	.02	34				5,749.40			43.35																				14 45	
3	F E Schneider Paving Co	Cooksey	Dolphin st	S E B L Brevard st	W B L Mt Royal ave	39 05	484.20	.09	27 20	.01	.13	Bermudez	1½"	Cobble	2,256.20	$0.80																							
4	F E Schneider Paving Co	Cooksey	Preston st	E C L Eutaw st	W. B. L. Linden ave	38 80	325.20	.06	26.50	.01	.08	Bermudez	1½"	Cobble	1,438 20	$0.80																					6"	159 40	
			Preston st	W B L Linden ave	W. B. L. Cathedral st	39 06	1,193.70	.23	120.85	.02	.30	Bermudez	1½"	4"	3.091.40	1.70	6"	405.90	$1.98																		6"	174 30	$3 45
	Total contract						1,518.90	.29	147.35	.03	.38				4,529.60			405.90																				333 70	
5	F E Schneider Paving Co	Cooksey	Brevard st	N C L Biddle st	S. C. L. Dolphin st	35.85	1,219.25	.23	71.90	.02	.27	Bermudez	1½"	4"	2,134.49	$1 70	4"	427 25	$1.70																		4" 6"	142.50 88 50	$3 45
			Biddle st	N. W. B. L. Brevard st	W. B. L. Cathedral st	37.50	53.05	.01			.01	Bermudez	1½"	4"	89.97	1.70	4"	6.75	1.70																		4"	2.25	
			Dolphin st	S. W. B. L. Brevard st	S. E. B. L. Brevard st	39.10	59.75	.01	13 00	00	.01	Bermudez	1½"	4"	200 84	1 70	4"	8.60	1.70																		4" 6"	2.85 1 50	3 45
	Total contract						1,332.05	.25	84.90	.02	.29				2,425.30			442 60																				237.60	
6	Elder Paving and Contracting Co	Cooksey and Wilhar.	Aisquith st	N. B L. Chase st	S. B. L. Preston st	35 92	535.90	.10			13	Bermudez and Mexican.	2"	4"	2,302.73	$1.59																							
			Aisquith st	N B. L. Preston st	N. side Federal st	35.53	1,145.90	.22	72 95	01	.26	Bermudez and Mexican.	2"	6"	2,284.97	1.73	6"	1,787.37	$1.87																		6"	502.98	$3 14
			Aisquith st	N side Federal st	S B L North ave	35 60	1,165 90	.22	60 55	.01	.28	Bermudez and Mexican.	2"	Cobble	4,839 04	.79																							
			Biddle st	E. end Jones Falls Bridge	E. C. L. Bond st	39 35	3,907.45	.74	425.70	.08	1.04	Texaco	2"	Cobble	17,207.43	.79	6"	21.75	1.87																		6"	7.25	3 14
			Bond st	N. C. L. Biddle st	S B L North ave	41.92 30.10	1,395.72 1,255.98	.50	189.30	.03	64	Bermudez and Mexican.	2"	Cobble	10,918 71	79	6"	23.37	1.87																		6"	7 79	3 14
			Harford ave	E. side Ensor st	S. B. L. Oliver st	29.91 30.07	265.25 1,484 88	.33	.80	.00	.33	Bermudez and Mexican.	2"	4"	5,881 84	1.59																							
			Hoffman st	E. B. L. Greenmount ave	W. side Ensor st	30.08	1,286.90	24	197.30	.04	.28	Bermud. 60%, Mex. 40%.	2"	Cobble	4,696.51	.79																							
			Hoffman st	W side Ensor st	W B L Aisquith st	30.09	401.60	.08	105.00	.02	09	Bermud 60%, Mex 40%	2"	4"	1,522.40	1.59																							
			Hoffman st	E B L. Aisquith st	W B L Central ave	30 05 39.00	263.10 151.85	.08	4.50	.00	.07	Bermud 60%, Mex 40%.	2"	Cobble	1,286.28	.79																							
			Hoffman st	E B L Central ave	W B L Eden st	30 18	198.00	.04	35.25	01	.04	Bermud. 60%, Mex. 40%.	2"	Cobble	688 58	79																							
			Hoffman st	E B. L Caroline st	W B L Bond st	39 42	335 45	.06	79.00	.02	.09	Mexican	2"	Cobble	1,363.12	.79																							
	Total contract						13,793.88	2.61	1,170 35	.22	3 25				52,991.61			1,832.49																				518 02	
7	P Flanigan & Sons	Smith	Chester st	N B L Orleans st	S B. L. Jefferson st	41.95	325.60	.06	41.40	01	.09	Bermudez and Mexican.	2"	Cobble	1,588.50	$0.77																							
			Chester st	N. C. L. Jefferson st	S. B. L. McElderry st	41.90	341.00	.06	14 10	00	.08	Bermudez and Mexican.	2"	4"	1,152.90	1.62	6"	256.00	$1.83																		6"	73 10	$3 12
			Chester st	N B L Monument st	N B L Ashland ave	41 56	703 93	13	31 70	01	19	Bermudez and Mexican.	2"	Cobble	3,325 50	.77																							
			Chester st	N B L Eager st	S B L Chase st	41 95	436 90	08	13 70	00	.12	Bermudez and Mexican.	2"	Cobble	2 056.60	77																							
			Eager st	E B L. Broadway	W B L Chester st	39.10	1,666 35	32	257 00	.05	.45	Bermudez and Mexican.	2"	Cobble	7,763 40	77																							
			Eager st	W B. L. Wolfe st	E B L Wolfe st	38.95	58.25	.01	26 85	00	.02	Bermudez and Mexican	2"	6"	216 00	1 76	6"	21.90	1.83																		6"	7 30	3.12
			Jefferson st	E B L Aisquith st	W B L Broadway	35 64	2,010.40	.38	232.50	.04	.49	Standard Mexican	2"	Cobble	7,858 50	77	6"	20 00	1.83																		6"	6 70	3 12

USED ON PAVING DONE BY CONTRACT FOR THE PAVING COMMISSION.

Vitrified Block Paving							Vitrified Block Repaving					Vitrified Block Gutter				Granite Block Paving								Granite Block Repaving								Total Areas of Improved Paving			Record Dates.							Remarks and Intersecting Streets
	City.			Railway			City.		City and Railway, Price	Railway.		City.				City.				Railway.				City.				Railway.														
Name of Block	Base	Area	Price.	Base.	Area	Price.	Base	Area.		Base.	Area.	Base	Area	Price.	Name of Block	Base.	Filler.	Area.	Price.	Base.	Filler.	Area.	Price.	Base.	Filler.	Area	Price.	Base.	Filler.	Area	Price.	City Area.	Railway Area.	Combined Area.	Date of Contract.	Date of Starting.	Date of Complet'n	Guaranty Expires	Assigned to City Eng. Dept.	Assigned to Appeal Tax Court.	
[illegible]				6"	102 [illegible]	$2 20																										5,156 80	131 96	5,288.76	11-11 11	11-13-11	1- 6-12	1-15-17	1-15-12	8- 1-12	
[illegible]				6"	10[illegible]	$2 20																										4,501 30		4,501 30	11-11 11	11-16-11	5-31-12	8-28-17	8-28-12	8- 1-12	Linden avenue.
[illegible]				6"	10[illegible]	2.20																										226.50	131 50	358.00	11-11-11	11-16-11	5-31-12	8-28-17	8-28-12	8- 1-12	
[illegible]																																1,021.60	130.00	1,151.60	11-11-11	11-10-11	5-31-12	8-28-17	8-28-12	8- 1-12	
					203 [illegible]																											5,749 40	261 50	6,010 90	11-11-11	11-16-11	5-31-12	8-28-17	8-28-12	..	
[illegible]																																2,256 20	..	2,256.20	11-11-11	12-11-11	5-31-12	8-28-17	8-28-12	8- 1-12	
[illegible]																																1,438 20		1,438 20	11-11-11	3-27-12	5-31-12	8-28-17	8-28-12	8- 1-12	
[illegible]				6"	1,47[illegible]	$2 20																										3,091 40	2,215 40	5,306.80	11-11-11	3-27-12	5-31-12	8-28-17	8-28-12	8- 1-12	Preston street
					1,47[illegible]																											4,529.60	2,215.40	6,745.00	11-11-11	3-27-12	5-31-12	8-28-17	8-28-12		
[illegible]				6"	1,923 [illegible]	$2 [illegible]																										2,134 49	2,581 88	4,716 37	[illegible]-11	3-20-12	5-20-12	9-11-17	9-11-12	8- 1-12	
[illegible]				6"	111	2 20																										89 97	120 25	210 22	11-11-11	3-20-12	5-20-12	9-11-17	9-11-12	8- 1-12	
[illegible]				6"	[illegible]	2 20																										200.84	63 77	264 61	11-11-11	3-20-12	5-20-12	9-11-17	9-11-12	8- 1-12	
					2,08[illegible]																											2,425 30	2,765.90	5,191 20	11-11-11	3-20-12	5-20-12	9-11-17	9-[illegible]		
[illegible]		2[illegible]	[illegible]	6"	[illegible]	[illegible]		1 14	$1 18	6	1 03																					2,302.73		2,302 73	[illegible]-15-12	6- 1-12	11-29-12	1-15-18	1-15-13	11- 1-12	Harford avenue
[illegible]	6"	[illegible]																														2,288.11	2,294 16	4,582 27	[illegible]-15-12	6- 1-12	11-29-12	1-15-18	1-15-13	11- 1-12	
[illegible]																																4,860.03		4,860.03	[illegible]-15-12	6- 1-12	11-29-12	1-15-18	1-15-13	11- 1-12 11- 1-12	L[illegible] avenue
[illegible]		209 62	..	6"	9[illegible]	2 20		38 90	1 18			6"	737 45	$2 21																		18,193.40	126 0[illegible]	18,319 43	[illegible]-15-12	7- 2-12	11-29-12	1-15-18	1-15-13	10- 1-12	[illegible]
[illegible]		[illegible]	[illegible]	6"	12[illegible]	2 20		34 00	1 18			6"	71 21	2 21																		11,104 19	127 41	11,231 60	[illegible]-15-12	6-24-12	11-11-12	1-15-18	1-15-13	10- 1-12	[illegible]
[illegible]		8.75					6"	41	1 18																							5,891.00		5,891.00	1-15-12	5-2[illegible]-12	7-17-12	1-15-18	1-15-13	8- 1-12	[illegible] Preston [illegible]
[illegible]	6"	169 14																														4,865 65		4,865 65	1-15-12	5-26-12	8- 6-12	1-15-18	1-15-13	8- 1-12	
[illegible]		[illegible]	2 21																													1,59[illegible]		1,[illegible]	[illegible]-15-12	5-26-12	8- [illegible]-12	[illegible]	[illegible]	8- [illegible]-12	
[illegible]		[illegible]	[illegible]																													1,288.12		1,288.12	[illegible]-15-12	5-26-12	8- 6-12	1-15-18	1-15-13	8- 1-12	
[illegible]	6"	20 37																														708 95		708.95	[illegible]-15-12	5-26-12	8- [illegible]-12	[illegible]-15-18	1-15-13	8- 1-12	
[illegible]		100 92										6"	10[illegible]37	[illegible] 21																		1,571 41		1,571 41	[illegible]-15-12	[illegible]	[illegible]	[illegible]	[illegible]	10- 1-12	
		[illegible]			[illegible]			74 45			1.03		916.03																			[illegible],635 55	2,577.60	57,213 15	[illegible]-15-12	[illegible]	11-2[illegible]-12	[illegible]	1-15-1[illegible]		
[illegible]		[illegible]						13 60	$1 17																							1,635 [illegible]		1,635 60	[illegible]-12	6-13-12	8-21-12	[illegible]	7-23-13	9- 1-12	
[illegible]		[illegible]																														1,167.80	329 10	1,496.90	3- 8-12	6-13-12	8-21-12	[illegible]	[illegible]	9- 1-12	
[illegible]		14 20	2 22																													3,[illegible]		3,[illegible]	3- 8-12	7- 3-12	8-21-12	[illegible]	7-23-13	9- 1-12	M[illegible] street
[illegible]								2.00	1 17																							2,058.60		2,058.60	[illegible]	6-26-12	8-26-12	7-23-18	7-23-13	9- 1-12	
[illegible]		10[illegible]						.00	1 17																							7,875 10		7,875.10	[illegible]	[illegible]	11-21-12	[illegible]	7-23-13	11- [illegible]-12	W[illegible] street
[illegible]					[illegible]	$2 20																										216.00	125 70	341 70	[illegible]	8- 6-12	11-21-12	[illegible]	7-23-13	11- 1-12	
[illegible]		[illegible]	[illegible]	6"	8[illegible]	2 20		21 80	1 17			6"	477 [illegible]	$2 22																		8,467 30	114 90	8,582 20	3- 8-12	3- 5-13	5-21-13	[illegible]	7-2[illegible]	5-20-1[illegible]	[illegible]

TABLE 3 (Continued)—STATEMENT OF LENGTHS, WIDTHS AND AREAS OF

Contract Number	Contractor.	Assistant Engineer in Charge.	Name of Improved Street.	From.	To.	Measurements.						Sheet Asphalt Paving.								Bituminous Concrete Paving.								Wood Block Paving.									[illegible]		
						Width.	Length of Streets.		Lengths of Returns.		Miles Av'g 30 Ft Wide.	Name of Asphalt.	Depth of Topping.	City.			Railway.			Name of Asphalt	Depth of Surface	City.			Railway.			Name of Block.	City.				Railway				[illegible]		
						Feet.	Feet.	Miles.	Feet.	Miles.				Base.	Area.	Price.	Base.	Area.	Price.			Base.	Area.	Price.	Base.	Area.	Price.		Base.	Filler.	Area	Price.	Base	Filler.	Area.	Price	[illegible]	[illegible]	[illegible]
			Jefferson st	E. B. L. Wolfe st	E. C. L. Washington st	36.15	355.65	.07	71.70	.01	.09	Bermudez on cobble, Bermudez 60 % and Mexican 40% on concrete.	2"	6"	1,073.30	$1.76	6"	334.60	$1.83																		6"	[illegible]	[illegible]
			Jefferson st	E. C. L. Washington st	E. B. L. Chester st	36.15	501.80	.10	81.00	.02	.12		2"	4"	1,638.00	1.62	6"	354.30	1.83																		6"	[illegible]	[illegible]
			Jefferson st	E. B. L. Chester st	W. B. L. Patterson Park ave	35.90	706.15	.14	84.70	.02	.17		2"	Cobble	2,960.00	.77																							
			Madison st	E. B. L. Broadway	W. B. L. Patterson Park ave	39.49	2,487.70	.47	411.25	.08	.67		2"	Cobble	11,628.00	.77	6"	21.70	1.83																		6"	[illegible]	[illegible]
	Total contract						9,593.73	1.82	1,265.90	.24	2.49				41,260.70			1,008.50																				[illegible]	
8	Filbert Paving and Construction Co	Williar	Aisquith st	N. B. L. Monument st	S. B. L. Madison st	35.40	321.05	.06	24.50	.00	.07	Bermudez and Aztec	2"	6"	461.52	$1.74	6"	107.22	$1.74																		6"	[illegible]	[illegible]
			Aisquith st	S. B. L. Madison st	N. B. L. Madison st	35.15	64.80	.01	25.90	.01	.02																												
			Aisquith st	N. B. L. Madison st	S. B. L. Ashland ave	34.85	321.00	.06			.07	Bermudez and Aztec	2"	Cobble	1,212.52	.78																							
			Aisquith st	S. B. L. Ashland ave	N. side Ashland ave	35.25	54.80	.01	24.50	.00	.02	Bermudez and Aztec	2"	6"	253.87	1.74	6"	19.93	1.74																		6"	[illegible]	[illegible]
			Bond st	N. B. L. Madison st	S. B. L. Gay st	42.10	953.00	.18	110.80	.02	27	Aztec	2"	6"	4,496.75	1.74																							
			Conway st	E. B. L. Sharp st	W. B. L. Charles st	38.40	730.45	.14	26.60	.01	.17	Aztec	2"	6"	1,250.80	1.74	6"	243.67	1.74																		6"	[illegible]	[illegible]
			Conway st	E. B. L. Charles st	W. B. L. Light st	37.00	312.10	.06			.07																												
			Eager st	E. side Jones Fall Bridge	W. side Greenmount ave	38.90	887.85	17	93.90	.02	.23	Bermudez and Mexican	2"	Cobble	4,130.43	.78																							
			Eager st	E. side Greenmount ave	E. Side Homewood ave	38.75	253.45	.05	27.60	.01	.07	Bermudez and Mexican	2"	6"	1,123.94	1.74																							
			Eager st	E. B. L. Ensor st	W. B. L. Gay st	38.75	1,671.55	.32	176.40	03	.44	Bermudez and Mexican	2"	Cobble	7,195.22	.78	6"	22.03	1.74																		6"	[illegible]	3.15
			Eager st	E. B. L. Gay st	W. B. L. Broadway	38.76	515.85	.10	27.60	01	.13	Bermudez and Mexican	2"	6"	2,043.60																								
			Front st	N. B. L. Gay st	S. B. L. Hillen st	30.10	421.75	.08	10.30	.00	.08	Aztec	2"	6"	1,269.50																								
			Harford ave	E. side Forrest st	S. C. L. Ashland ave	30.12	922.40	.17	47.40	01	.18	Bermudez and Mexican	2"	6"	2,997.48	1.74																							
			Harford ave	S. C. L. Monument st	N. C. L. Monument st	30.10	43.70	.01	17.50	.00	01																												
			Harford ave	S. B. L. Madison st	N. B. L. Madison st	30.15	73.50	.01	20.80	.00	.02																												
			High st	N. B. L. Baltimore st	S. C. L. Fayette st	30.05	286.85	.05			.06	Bermudez	2"	6"	957.55	1.74																							
			High st	S. C. L. Fayette st	N. B. L. Fayette st	29.23	31.15	.01	19.20	.00	.01																												
			High st	N. B. L. Lexington st	S. B. L. Hillen st	30.10	1,052.05	.20	58.40	.01	.21	Bermudez and Aztec	2"	6"	3,428.98	1.74																							
			Madison st	E. B. L. Gay st	W. B. L. Broadway	38.80	1,497.40	.28	207.80	.04	.40	Aztec	2"	6"	6,467.15	1.74	6"	22.05																				6"	[illegible]	[illegible]
	Total contract						10,414.70	1.97	919.20	.17	2.53				37,319.31			414.90																				[illegible]	
9	D. M. Andrew Co	Duncan and Williar	Biddle st	E. C. L. Bond st	W. B. L. Broadway	39.15	462.55	.09	59.70	.01	12																										6"	[illegible]	[illegible]
			Central ave	S. B. L. Oliver st	E. C. L. Harford ave	43.00	179.80	.03			.05																										6"	[illegible]	[illegible]
			Harford ave	S. B. L. Oliver st	S. B. L. North ave	30.09	1,750.40	33	104.60	.02	35																												
			Oliver st	W. B. L. Harford ave	E. B. L. Central ave	34.30	85.50	02			.02																												
	Total contract						2,478.25	.47	164.30	03	.54																											[illegible]	
10	D. M. Andrew Co	Painter	Aisquith st	S. C. L. Orleans st	S. side Gay st	35.39	1,055.95	.20	99.30	.02	.24																												
			Aisquith st	N. side Gay st	N. B. L. Monument st	35.31	109.18	.02	22.55	.00	.03																												
			Ensor st	N. side Gay st	N. B. L. Ashland av	30.22 45.70	1,584.08 161.10	.33	96.50	.02	.35																										6"	[illegible]	[illegible]
			Monument st	W. B. L. Ensor st	E. B. L. Ensor st	38.76	89.70	.02	28.65	.01	.05																										6"	98.07	
			Madison st	E. B. L. Greenmount ave	W. B. L. Central av	39.08	1,594.43	.30	157.85	03	.40																												
	Total contract						4,504.44	.87	404.85	08	1.07																											[illegible]	

MATERIALS USED ON PAVING DONE BY CONTRACT FOR THE PAVING COMMISSION.

Name of Block	Vitrified Block Paving						Vitrified Block Repaving					Vitrified Block Gutter.			Name of Block.	Granite Block Paving								Granite Block Repaving								Total Areas of Improved Paving.			Record Dates						Remarks and Intersections Omitted
	City.			Railway			City		City and Railway, Price	Railway.		City.				City.				Railway.				City.				Railway				City Area	Railway Area.	Combined Area.	Date of Contract.	Date of Starting.	Date of Complet'n	Guaranty Expires	Assigned to City Eng Dept.	Assigned to Appeal Tax Court.	
	Base.	Area	Price.	Base	Area.	Price	Base	Area.		Base.	Area	Base.	Area	Price		Base	Filler	Area	Price.	Base	Filler.	Area.	Price.	Base.	Filler.	Area	Price.	Base.	Filler.	Area.	Price.										
[illegible]	6"	[illegible]	$2 22	...																												1,099 40	449 90	1,549.30	3- 8-12	6- 5-12	8-23-12	7-23-18	7-23-13	9- 1-12	
[illegible]	6"	53 50	2 22	...																												1,691 50	457 70	2,149 20	3- 8-12	6- 5-12	8-23-12	7-23-18	7-23-13	9- 1-12	
[illegible]	6'	14 [illegible]	2 22	...			6"	1 60	$1 17½																							2,976 50		2,976.50	3- 8-12	6- 5-12	8-23-12	7-23-18	7-23-13	9- 1-12	
[illegible]	6"	122.80	[illegible]	6"	[illegible]	$2 3[illegible]																										11,750 80	134 30	11,885.10	3- 8-12	8-20-12	11-18-12	7-23-18	7-23-13	11- 1-12 10- 1-12	
		[illegible]			[illegible] 10			41 90					477 90																			42,278 30	1,611 60	43,889 90	3- 8-12	6-13-12	5-24-13	7-23-18	7-23-13		
[illegible]				6"	48[illegible].79	$2 35	"	11 80	$1 18			6"	107 02	$2 20																		580.43	631.75	1,212 18	3- 9-12	8-28-12	12- 6-12	8-27-18	8-27-13	12- 1-12	
[illegible]	6"	277 97	$2 20	6'	[illegible]	2.35																										277 97	94 76	372.73	3- 9-12	8-28-12	12- 6-12	8-27-18	8-27-13	12- 1-12	
[illegible]																																1,242 52		1,242.52	3- 9-12	8-28-12	12- 6-12	8-27-18	8-27-13	11- 1-12	
[illegible]												6"	[illegible] 52	2 20										......	......	......	......	6"	Cement	32 96	$1.18	256 39	59 53	315.92	3- 9-12	8-28-12	12- 6-12	8-27-18	8-27-13	11- 1-12	
[illegible]		56.04	[illegible]					18	1 18			6"	251 72	2 20						6'	Cement	1,151.30	$3 25									4,804 69		4,804.69	3- 9-12	3-13-13	6- 6-13	8-27-18	8-27-13	5-20-13	
[illegible]		[illegible]	2.21									6"	244 47	2 20	Petersburg & Woodstock	6"	Cement	598 19	$3 20	6"	Cement	621 31	3 25									1,505 53	1,476 19	2,981 72	3- 9-12	8- 7-12	1-21-13	8-27-18	8-27-13	1- 1-13	Hanover street.
[illegible]															Petersburg & Woodstock																	598 19	621 31	1,219 50	3- 9-12	8- 7-12	1-21-13	8-27-18	8-27-13	5-20-13	
[illegible]					......		6"	[illegible]	1 18																							4,146 22		4,146.22	3- 9-12	7- 8-12	7-18-13	8-27-18	8-27-13	7-17-13 10- 1-12	Brentwood avenue
[illegible]	6"	[illegible]	2 20									6"	79 51	2 20																		1,213 45		1,213 45	3- 9-12	7- 8-12	7-18-13	8-27-18	8-27-13	10- 1-12	
[illegible]	6"	31 33	2.20	6"	[illegible]	2 35	6"	18.14	1.18			6"	347 97	2 20																		7,592 66	124.04	7,716.70	3- 9-12	7-22-12	5-30-13	8-27-18	8-27-13	1- 1-13 5-20-13	Aisquith street and [illegible] avenue
[illegible]	6"	41.62	2 20									6"	151 40	2.20																		2,236 62		2,236.62	3- 9-12	7-22-12	5-30-13	8-27-18	8-27-13	5-20-13	Bond street.
[illegible]	[illegible]	27.62	2 20							......		6"	149 60	2 20																		1,437 72		1,437 72	3- 9-12	11- 6-12	1-24-13	8-27-18	8-27-13	7-17-13	
[illegible]	6"	[illegible]	2 20									[illegible]	135 62	2 20																		3,181 81		3,181.81	3- 9-12	6-27-12	10-26-12	8-27-18	8-27-13	11- 1-12	Monument and [illegible] streets
[illegible]															Petersburg & Woodstock	6"	Cement	174.19	3 20	6"	Cement Bit.	23 73 27.63	3 25 3 75									174 19	51.36	225.55	3- 9-12	6-27-12	10-26-12	8-27-18	8-27-13	11- 1-12	
[illegible]	[illegible]	344 51	2 20																													344 51		344 51	3- 9-12	6-27-12	10-26-12	8-27-18	8-27-13	11- 1-12	
[illegible]		27.81	2 20																													988 30		988 30	3- 9-12	6-19-12	7-27-12	8-27-18	8-27-13	8- 1-12	
[illegible]															Petersburg & Woodstock	6"	Cement	111 18	3 20	6'	Cement	47 73	3.25	......		......		......				111 18	47 73	158 91	3- 9-12	6-19-12	7-27-12	8-27-18	8-27-13	8- 1-12	
[illegible]		7[illegible]	[illegible]									6'	128 88	2 20																		3,628 48		3,628 48	3- 9-12	6-22-12	12-10-12	8-27-18	8-27-13	10- 1-12 7-17-13	[illegible] street
[illegible]	6"	104.22	2.20	6"	[illegible]	2.35		16 17	1 18			6'	317 31	2 20																		6,904 85	124 86	7,029 71	3- 9-12	3-29-13	6- 7-13	8-27-18	8-27-13	7-17-13	
		1,050.71			[illegible]			62 17					[illegible]					883 56				1,871.70								32 96	..	41,222 77	3,231 53	44,454 30	3- 9-12	6-19-12	7- 8-13	8-27-18	8-27-13		
[illegible]	.	2,095 23	[illegible]																													2,095 23		2,095.23	3- 4-12	4-30-12	6- 8-12	12-27-17	12-27-12	8- 1-12	
[illegible]		[illegible]	[illegible]	6'	[illegible]	$2 14				....																						542 86	307 36	850 22	3- 4-12	5- 6-12	7-15-12	12-27-17	12-27-12	1[illegible]- 1-12	
[illegible]	6"	[illegible]	[illegible]	6"	[illegible]	2.14		37 75	$1 0[illegible]	....																						3,090 24	3,092.35	6,182.59	3- 4-12	5- 6-12	7- 8-12	12-27-17	12-27-12	8- 1-12	
[illegible]	6"	[illegible]	[illegible]																													352 05		352 05	3- 4-12	5- 6-12	7-15-12	12-27-17	12-27-12	8- 1-12	Harford and [illegible] avenues
		6,042 63						37 75																								6,080.38	3,399 71	9,480 09	3- 4-12	4-30-12	7-15-12	12-27-17	12-27-12		
[illegible]		2,124.36	$2 [illegible]	6'	2,101 16	$2 08																										2,124.36	2,101.16	4,225.52	3- 2-12	7-14-12	12-11-12	2-12-18	2-12-13	1- 1-12	
[illegible]															Petersburg	6	Cement	177.53	$3.30	6'	Cement	328.11	$3 25									177.53	328 11	505 64	3- 2-12	7-14-12	12-11-12	2-12-18	2-12-13	1- 1-12	
[illegible]	6"	[illegible]	[illegible]	6'	[illegible]	2 08									Petersburg	6"	Cement	20.30	3 30	6"	Cement	3.90 81.20	3 25 3 11					6"	Cement	861.00	$2.00½	4,601 88	1,470 37	6,072 25	3- 2-12	7-15-12	11- 8-12	2-12-18	2-12-13	11- 1-12	Monument street
[illegible]															Petersburg	6"	Cement	631.49	3 30	6	Cement Bit.	165.52 79 31	3.25 3.45									631 49	244 83	876.32	3- 2-12	7-15-12	11- 8-12	2-12-18	2-12-13	11- 1-12	
[illegible]	6"	[illegible]	[illegible]	6'	[illegible]	2 08									Petersburg																	6,227.02	871 65	7,098 67	3- 2-12	6-21-12	6-10-12	2-12-18	2-12-13	10- 1-12	Harford avenue [illegible] and Aisquith streets
		[illegible]			[illegible]													829.32				658 04								861 00		13,762 28	5,016 12	18,778 40	3- 2-12	6-21-12	12-11-12	2-12-18	2-12-13		

TABLE 3 (Continued)—STATEMENT OF LENGTHS, WIDTHS AND AREAS OF

Contract Number	Contractor.	Assistant Engineer in Charge	Name of Improved Street.	From.	T	Measurements.						Sheet Asphalt Paving.								Bituminous Concrete Paving								Wood Block Paving.									Wood Block [illegible]		
						Width.	Length of Streets.		Lengths of Returns.		Miles Av'g. 30 Ft. Wide	Name of Asphalt	Depth of Topping.	City.			Railway.			Name of Asphalt	Depth of Surface	City.			Railway.			Name of Block.	City.				Railway				Railway		
						Feet.	Feet.	Miles.	Feet.	Miles.				Base.	Area.	Price.	Base.	Area	Price.			Base.	Area.	Price.	Base.	Area	Price.		Base.	Filler.	Area	Price.	Base.	Filler.	Area.	Price.	Base.	Area.	Price.
11	N. A. Middleton & Co.	Noland	Barre st	E B L Sharp st	E rail Charles st	38 95	751.30	.14	77 90	.01	.20																												
			Camden st	E B L Hanover st	E B L Charles st	37 90	339 30	.07	26 60	.01	.08																												
	Total contract						1,090.60	.21	106.50	02	.28																												
12	N. A. Middleton & Co.	Duncan and Williar.	Chester st	N B L. Ashland ave.	S. B. L. Eager st	41 77	442.20	.08	15.00	.00	.12																												
			Ensor st	N B L. Ashland ave	E C L Harford ave	30.10	625.95	.12	32.55	.01	.13																												
			Harford ave	S C L Ashland ave	W side Ensor st	30 05 28 40	705.58 61.15	.15	16 00	00	.15																												
	Total contract						1,834.88	.35	63 55	.01	.40																												
13	Cunningham Paving and Construction Co.	Painter	Bond st	N B L Gay st	S. B. L. Biddle st	41.80	619.24	.12	68.12	.01	.17																												
			Constitution st	N. B. L. Front st	S B L Monument st	29 00 42.00	379.80 110.90	.09	41.00	.01	.11																												
	Total contract						1,109.94	.21	109.12	.02	.28																												
14	Warner-Quinlan Asphalt C	Painter	Ensor st	N B L Chase st	S B L Lamont ave	30 15 30 08 19 60	645 70 321.65 1,594.60	.48	134 25	.03	.43									Montezuma	2½"	Cobble	6,573.50	$0.92															
			Lafayette ave	E B. L. Aisquith st	W B L Caroline st	39.55	1,059.65	.20	168.25	03	.28									Montezuma	2½"	Cobble	4,565.23	92															
			Lafayette ave	E B L Caroline st	W B L Broadway	30 32	771.78	.15	164 00	.03	.20									Montezuma	2"	4"	3,209.42	1.04⅓															
			Lanvale st	E B L Ensor st	W B L Broadway	29.93 30 40	370.65 1,775.60	.41	362.20	.07	.55									Montezuma	2½"	Cobble	8,717.34	.92															
			Oliver st	E B L Ensor st	W side alley west of Harford ave	29 75 30 00	279.15 281.70	.11	69 45	.01	.11									Montezuma	1½"	5"	1,649.96	1.32⅔															
			Oliver st	W. side alley west of Harford ave	W B L Harford ave	30 00	130 45	.02	36.70	01	.03									Montezuma	1½"	6"	397.62	1.43⅔															
			Oliver st	E B L Central ave	W. B L. Lamont ave	30 35	105.55	.02	13 40	.00	.03									Montezuma	1½" 2½"	5" Cobble	100.63 425.67	1.32⅔ .92															
			Valley st	N B L Chase st	S B L Hoffman st	30 60 30 07	645.70 322 90	.18	50.80	01	.23									Montezuma	2½"	Cobble	3,595.42	.92															
	Total contract						8,305.08	1 57	999 65	.19	1.86												*29,234.79																
15	Warner-Quinlan Asphalt Co	Smith	Chester st	S B L Lombard st	97 ft. south of S. C. L. Baltimore st	42.05	333.85	.06	40 00	01	.09	Aztec	2"	6"	1,614 00	$1 74																							
			Chester st	97 ft. south of S. C. L. Baltimore st.	S B L Baltimore st	42.05	86 00	02			.02	Aztec	1½"	Cobble	401.10	.74																							
			Collington ave	N B L Orleans st	S B L Ashland ave	30.10	1,688.60	32	244 38	04	.34	Aztec	2"	6"	5,367.70	1 74																							
			Collington ave	S. B L. Monument st	N B L Monument st	30 10	66.30	01	39 80	01	.02																												
			Lombard st	E. C. L. Chester st	E B L Duncan st	30 25	157.00	03	24.00	.00	.04	Aztec	2"	6"	663 05	1 74																							
			Lombard st	E B L Duncan st	W B L Collington ave	30 25	125.10	.02			.03	Aztec	1½"	Cobble	503.70	.74																							
			Lombard st	W. B. L. Collington ave	W C L Patterson Park ave	36.20	447 15	09	47 50	01	.11	Aztec	2"	6"	1,962.46	1 74																							
			Patterson Park ave	S. B L. Lombard st	N B L Lombard st	40 50	60.15	01			.01	Aztec	2"	6"	194.89	1 74	6"	20.00	$1.74																				3 00
			McElderry st	E side Duncan st	E B L Milton ave	30 40	1,288 65	25	150 00	03	34	Aztec and Montezuma	1½"	Cobble	5,794.90	74																							
			McElderry st	W. B. L. Patterson Park ave	E B L Patterson Park ave	30 45	70.00	01	26.47	00	.02	Aztec and Montezuma	2"	6"	358.10	1 74	6"	22.00	1 74																				3 00
			Milton ave	N. B. L. Baltimore st	S B. L. McElderry st	41 92	1,805.65	36	125 90	.02	.52	Aztec and Montezuma	1½"	Cobble	9,063.60	.74																							
			Milton ave	S. B. L. Fairmount ave	N B L Fairmount ave	41.90	69.80	01	27 90	01	03																												3 00
			Milton ave	S B L Fayette st	N B L Fayette st	42.05	69.65	01	27 00	.00	.03																												
			Montford ave	N B L Baltimore st	S B L Fairmount ave	41 90	342.70	.07	13 80	.00	.09	Aztec	1½"	Cobble	1,504 50	74																							
			Montford ave	S B L Fairmount ave	N B L Fairmount ave	41 90	69 95	01	27 70	01	.03																												
			Montford ave	N. B L. Fairmount ave	S B L Fayette st	41 90	404 90	08	42 20	.01	.11	Aztec	2"	6"	1,883.90	1.74																							
			Montford ave	S. B. L. Fayette st	N B L Fayette st	41.85	70.05	01	28 30	01	.03																												

MATERIALS USED ON PAVING DONE BY CONTRACT FOR THE PAVING COMMISSION.

Name of Block	Vitrified Block Paving						Vitrified Block Repaving					Vitrified Block Gutter.			Name of Block	Granite Block Paving								Granite Block Repaving								Total Areas of Improved Paving			Record Dates.						Remarks and Intersections Omitted
	City.			Railway.			City.		City and Railway Price	Railway.		City.				City.				Railway.				City.				Railway.													
	Base	Area	Price.	Base	Area	Price	Base	Area.		Base	Area	Base.	Area.	Price		Base.	Filler.	Area.	Price.	Base	Filler.	Area.	Price.	Base	Filler	Area	Price.	Base.	Filler.	Area	Price.	City Area.	Railway Area.	Combined Area.	Date of Contract.	Date of Starting.	Date of Complet'n.	Guaranty Expires	Assigned to City Eng Dept.	Assigned to Appeal Tax Court.	
															Guilford	6"	Cement	3,245.40	$3 09	6"	Cement	174 10	$3.34									3,245.40	174.10	3,419.50	2-28-12	9-11-12	11-14-12	7-23-18	7-23-13	11-1-12	Hanover street.
															Guilford	6"	Cement	1,464.10	3.09			...	...									1,464.10		1,464.10	2-28-12	8-10-12	9-26-12	7-23-18	7-23-13	10-1-12	
																		4,709.50				174 10										4,709.50	174.10	4,883.60	2-28-12	8-10-12	11-14-12	7-23-18	7-23-13		
							4"	15.55	$1.35						Maryland	4"	Cement	2,052.56	$2.97													2,068.11		2,068.11	2-28-12	5-29-12	8-1-12	7-23-18	7-23-13	9-1-12	
							4"	2.36	1.35 3/4						Maryland	4"	Cement	2,241.33	2.97													2,243.69		2,243.69	2-28-12	6-24-12	12-23-12	7-23-18	7-23-13	11-1-12	
															Maryland	4"	Cement	2,607.57	2 97					4"	Cement	10.12	$1.15 3/4					2,617.69		2,617.69	2-28-12	6-3-12	12-23-12	7-23-18	7-23-13	10-1-12	Eager street.
								17.91										6,901.46								10.12						6,929.49		6,929.49	2-28-12	5-29-12	12-23-12	7-23-18	7-23-13		
															Mt Airy	4"	Cement	2,965.95	$2.98													2,965.95		2,965.95	3-5-12	8-24-12	10-4-12	12-6-17	12-6-12	11-1-12	Chase street
															Mt. Airy	6"	Bit.	1,888.73	3.17													1,888.73		1,888.73	3-5-12	8-16-12	9-14-12	12-6-17	12-6-12	10-1-12	
																		4,854.68														4,854.68		4,854.68	3-5-12	8-16-12	10-4-12	12-6-17	12-6-12		
[illegible]	6"	[illegible]	[illegible]									6"	844.98	$2.20																		7,561.28		7,561.28	5-1-12	4-19-13	9-8-13	11-12-18	11-12-13	9-30-13	Biddle, Preston and Hoffman streets.
[illegible]		[illegible]	[illegible]									6"	384.99	2.20																		4,983.24		4,983.24	5-1-12	10-4-12	8-6-13	11-12-18	11-12-13	8-28-13	Harford avenue
[illegible]	6"	[illegible]	2 20									6"	253.12	2.20																		3,590.53		3,590.53	5-1-12	10-4-12	8-6-13	11-12-18	11-12-13	1-1-13	Bond street
[illegible]	6"	[illegible]	[illegible]									6"	758.64	2 20																		9,668.90		9,668.90	5-1-12	10-25-12	8-11-13	11-12-18	11-12-13	8-28-13	Asquith street, Lam[illegible] avenue, Harford avenue [illegible]
[illegible]		[illegible]	[illegible]									6"	187.51	2 20																		1,892.42		1,892.42	5-1-12	11-16-12	9-6-13	11-12-18	11-12-13	8-28-13	Asquith street
[illegible]	6"	[illegible]	[illegible]				[illegible]	34.40	$0.85 3/4			6"	36.26	2.20																		532.49		532.49	5-1-12	11-16-12	9-6-13	11-12-18	11-12-13	8-28-13	
[illegible]	6"	[illegible]	2 20									6"	35.18	2 20																		570.41		570.41	5-1-12	11-16-12	9-6-13	11-12-18	11-12-13	8-28-13	
[illegible]	6"	[illegible]	[illegible]									6"	322.87	2 20																		3,983.08		3,983.08	5-1-12	4-28-13	9-8-13	11-12-18	11-12-13	8-28-13	Biddle and Preston streets.
		[illegible]						34.40					2,829.45																			32,791.35		32,791.35	5-1-12	10-4-12	9-8-13	11-12-18	11-12-13		
[illegible]		[illegible]	$2 20																													1,645.90		1,645.90	5-1-12	6-18-12	9-18-12	2-19-18	2-19-13	10-1-12	
							6"	1 20	$0.90																							402.30		402.30	5-1-12	6-18-12	9-18-12	2-19-18	2-19-13	10-1-12	
[illegible]	6"	[illegible]	[illegible]					44.90	90			6"	457.70	$2.20																		6,047.10		6,047.10	5-1-12	6-17-12	11-2-12	2-19-18	2-19-13	10-1-12	[illegible]
	6"	[illegible]	2.20	6"	[illegible]	$2.25																										314.10	76 50	390.60	5-1-12	6-17-12	11-2-12	2-19-18	2-19-13	10-1-12	
																																663.05		663 05	5-1-12	6-17-12	11-13-12	2-19-18	2-19-13	10-1-12	
																																503.70		503 70	5-1-12	6-17-12	11-13-12	2-19-18	2-19-13	10-1-12	
																																1,962.46		1,962.46	5-1-12	6-17-12	11-13-12	2-19-18	2-19-13	10-1-12	
				6"		2.25																										194 89	59 40	254.29	5-1-12	6-17-12	11-13-12	2-19-18	2-19-13	10-1-12	
		[illegible]						4 00	90			6"	194.50	2 20																		6,025.90		6,025 90	5-1-12	7-8-12	10-30-12	2-19-18	2-19-13	11-1-12	[illegible]
				6"	[illegible]	2.25																										358.10	64 60	422.70	5-1-12	7-8-12	10-30-12	2-19-18	2-19-13	11-1-12	
			2 20				6"	14.80	90																							9,139.96		9,139.96	5-1-12	7-11-12	12-11-12	2-19-18	2-19-13	1-1-13	Fairmount avenue [illegible] Fayette street
	6"	[illegible]	2 20	6"	[illegible]	2.25																										301.75	140 30	442 05	5-1-12	7-11-12	12-11-12	2-19-18	2-19-13	1-1-13	
		[illegible]		6"	[illegible]	2.25																										299.49	140.80	440.29	5-1-12	7-11-12	12-11-12	2-19-18	2-19-13	1-1-13	
		[illegible]	2 20																													1,010 10		1,010 10	5-1-12	8-8-12	12-11-12	2-19-18	2-19-13	11-1-12	
		300 20	2 20	6"	[illegible]	2.25																										300 20	140 00	440 20	5-1-12	8-8-12	12-11-12	2-19-18	2-19-13	11-1-12	
		[illegible]	2 20																													1,930 10	....	1,930 10	5-1-12	8-8-12	12-11-12	2-19-18	2-19-13	11-1-12	
		[illegible]		6"	[illegible]	[illegible]																										302 70	141.50	444.20	5-1-12	8-8-12	12-11-12	2-19-18	2-19-13	11-1-12	

TABLE 3 (Continued)—STATEMENT OF LENGTHS, WIDTHS AND AREAS OF

Contract Number	Contractor	Assistant Engineer in Charge	Name of Improved Street	From	To	Measurements.						Sheet Asphalt Paving.								Bituminous Concrete Paving.								Wood Block Paving									[illegible]		
						Width.	Length of Streets.		Lengths of Returns.		Miles Av'g 30 Ft Wide	Name of Asphalt.	Depth of Topping.	City.			Railway.			Name of Asphalt.	Depth of Surface	City.			Railway.			Name of Block.	City				Railway				[illegible]		
						Feet.	Feet.	Miles	Feet.	Miles				Base.	Area.	Price.	Base.	Area.	Price.			Base.	Area.	Price	Base.	Area.	Price.		Base.	Filler.	Area	Price.	Base.	Filler	Area	Price	[illegible]	[illegible]	[illegible]
			Montford ave	N. B. L. Fayette st	N. C. L. Jefferson st	41.80	827.75	.16	99.40	.02	.24	Aztec	1½"	Cobble	4,041.90	$0.74																							
			Montford ave	N. C. L. Jefferson st	S. B. L. McElderry st	41.90	317.25	.06	110.80	.02	.09	Aztec	2"	6"	1,374.80	1.74																							
	Total contract						8,390.50	1.59	1,085.95	.20	2.19				34,819.50			42.00																				[illegible]	
16	Warner-Quinlan Asphalt Co.	Smith	Caroline st	N. B. L. Chase st	S. B. L. Preston st	47.68	644.15	.12	15.50	.00	.19	Montezuma	2"	4"	2,046.70	$1.67	6"	214.80	$1.74																		6"	71.60	[illegible]
			Caroline st	N. B. L. Preston st	S. B. L. Hoffman st	47.95	320.90	.06			.10	Montezuma	2"	Cobble	1,709.60	.82																							
			Caroline st	N. B. L. Oliver st	S. B. L. North ave	47.93	1,541.00	.29	96.10	.02	.48	Montezuma	2"	Cobble	8,474.50	.82																							
			Caroline st	S. B. L. Federal st	N. B. L. Federal st	47.90	65.40	.01	32.05	.01	.03	Montezuma	2"	4"	310.50	1.67	6"	26.70	1.74																		[illegible]	[illegible]	[illegible]
			Eden st	N. B. L. Madison st	S. B. L. Lanvale st	41.70	3,117.53	.59	147.45	.03	.84	Montezuma	2"	Cobble	14,281.60	.82																							
			Eden st	S. B. L. Ashland ave	N. B. L. Ashland ave	41.90	66.40	.01	28.25	.01	.02	Montezuma	2"	4"	358.20	1.67	6"	23.37	1.74																		[illegible]	[illegible]	3.00
			Eden st	S. B. L. Federal st	N. B. L. Federal st	41.80	65.85	.01	27.55	.01	.02	Montezuma	2"	4"	265.70	1.67	6"	23.13	1.74																				
			Greene st	N. B. L. Lombard st	S. B. L. Baltimore st	39.33	591.15	.12	52.45	.01	.15	Bermudez	2"	Cobble	2,638.20	.82																							
			Lombard st	E. B. L. Fremont ave	E. B. L. Penn st.	38.85	568.85	.11	27.00	.01	.14	Bermudez	2" 2"	4" 6"	1,160.00 140.40	1.67 1.74	4" 6"	165.00 24.10	1.67 1.74																		6"	[illegible]	3.00
			Lombard st	E. B. L. Penn st	W. B. L. Paca st	39.00	932.35	.18	13.50	.00	.22	Bermudez	2"	4"	2,000.30	1.67	4"	310.90	1.67									South'n Long Leaf Pine					6"	Bit.	1,389.40	$3.00	6"	[illegible]	[illegible]
			Penn st	N. B. L. Pratt st.	N. B. L. King st.	32.65	198.90	.04	22.00	.00	.04	Bermudez	2"	6"	484.30	1.74																							
			Penn st	N. B. L. King st.	S. B. L. German st.	32.72	519.20	.10	58.20	.01	.11	Bermudez	2"	Cobble	1,910.70	.82																							
			Pine st	N. B. L. German st	S. B. L. Saratoga st	30.10	1,328.72	.25	123.00	.02	.26	Bermudez	2"	Cobble	4,566.70	.82																							
			Pine st	S. B. L. Fayette st	N. B. L. Fayette st	30.15	66.20	.01	20.20	.00	.02																												
	Total contract						10,026.60	1.90	663.25	.13	2.62				40,362.40			788.00																	1,389.40			[illegible]	
17	Cunningham Paving and Construction Co.	Noland and Smith	Hollins st	W. B. L. Fremont ave	400 ft west of W. C. L. Fremont ave	38.50	381.35	.07			.09																												
			Preston st	W. B. L. Valley st	W. B. L. Caroline st	38.07	1,995.98	.38	327.50	.06	.52																												
			Preston st	W. B. L. Caroline st	E. B. L. Bond st	38.95	471.05	.09	70.85	.01	.13																												
			Preston st	E. B. L. Bond st	W. B. L. Broadway	39.20	448.00	.09	52.90	.01	.11																												
			Preston st	E. B. L. Broadway	W. side Gay st	39.50	532.25	.10	26.90	.01	.13																												
	Total contract						3,828.63	.73	487.15	.09	.98																												
18	Cunningham Paving and Construction Co.	Noland	Oliver st	E. B. L. Mt. Royal ave	W. B. L. alley west of Maryland ave	39.00	245.45	.04			.07																												
			Sharp st	N. C. L. Hill st	S. C. L. Camden st.	38.68	1,573.50	.30	136.40	.03	.38																												
	Total contract						1,818.95	.34	136.40	.03	.45																												
19	Consolidated Engineering Co.	Noland	Jenkins alley	N. B. L. Preston st	S. B. L. Hoffman st.	11.00	329.35	.06	4.40	.00	.03																												
			Mason alley	N. B. L. Preston st	S. B. L. Hoffman st.	11.67	328.50	.06			.02																												
	Total contract						657.85	.12	4.40	.00	.05																												
20	Filbert Paving and Construction Co.	Williar	Forrest st	N. B. L. Eager st	S. B. L. Chase st	30.10	435.70	.08			.08	Bermud. 60%, Mex. 40%.	2"	Cobble	1,433.24	$0.93																							
			Hollbrook st	N. B. L. Hoffman st	S. B. L. Lamont ave	30.10	1,321.05	.25	76.40	.01	.26	Bermud. 60%, Mex. 40%.	2"	Cobble	4,201.28	.93																							
			Homewood ave	N. B. L. Eager st	S. B. L. Chase st	30.75	434.55	.08	29.90	.01	.11	Bermud. 60%, Mex. 40%.	2"	Cobble	1,773.95	.93																							
			Jefferson st	W. B. L. Patterson Park ave	W. B. L. Milton ave	35.97	732.60	.14	109.10	.02	.18	Bermud. 60%, Mex. 40%.	2"	Cobble	3,007.89	.93	6"	19.83	$1.85⅓																		[illegible]	6.61	[illegible]
			Orleans st	E. B. L. Patterson Park ave	W. B. L. Milton ave	39.40	665.85	.13	141.60	.03	.18	Bermud. 60%, Mex. 40%.	2"	Cobble	2,710.13	.93																							
			Rutland ave	N. B. L. Eager st	S. C. L. Gay st	41.37	1,108.60	.21	199.40	.04	.31	Bermud. 60%, Mex. 40%.	2"	Cobble	4,984.78	.93																							
	Total contract						4,698.35	.89	556.40	.11	1.12				18,111.27			19.83																						

MATERIALS USED ON PAVING DONE BY CONTRACT FOR THE PAVING COMMISSION.

Name of Block	Vitrified Block Paving, City, Base	Vitrified Block Paving, City, Area	Vitrified Block Paving, City, Price	Vitrified Block Paving, Railway, Base	Vitrified Block Paving, Railway, Area	Vitrified Block Paving, Railway, Price	Vitrified Block Repaving, City, Base	Vitrified Block Repaving, City, Area	Vitrified Block Repaving, City and Railway, Price	Vitrified Block Repaving, Railway, Base	Vitrified Block Repaving, Railway, Area	Vitrified Block Gutter, City, Base	Vitrified Block Gutter, City, Area	Vitrified Block Gutter, City, Price
[illegible]	6"	75.10	$2.[illegible]											
[illegible]	6"	79.60	[illegible]				6"	19.00	$0.99[illegible]			6"	101.70	$2.20
		2,3[illegible].60			6[illegible].40			83.00					753.00	
[illegible]	6"	30.80	$2.10	6"	[illegible].10	$2.20						6"	6.00	$2.10
[illegible]														
[illegible]	6"	48.00	2.[illegible]	6"	1.50	2.20	6"	1.10	$0.99[illegible]			6"	7.00	2.10
[illegible]														
[illegible]	6"	1[illegible].60	2.10				6"	4.20	.99[illegible]			6"	313.02	2.10
[illegible]												6"	8.04	2.10
[illegible]				6"	1.90	2.20						6"	16.74	2.10
[illegible]	[illegible]	[illegible].20										6"	63.50	2.10
[illegible]	[illegible]	1.70	2.10	6"	8.80	2.20								
[illegible]	6"	3[illegible]	2.10											
[illegible]	6"	84.04	2.10	6"	[illegible].80	2.20								
[illegible]	6"	41.70	2.10									6"	2.60	2.10
[illegible]	6"	41.00	[illegible]									6"	14.30	2.10
[illegible]	6"	198.60	[illegible]	6"	[illegible].40	2.20								
		357.10			2[illegible].50			5.30					431.20	
[illegible]	4"	1,630.90	[illegible]											
[illegible]	4"	1,[illegible]	[illegible]											
[illegible]				6"	3[illegible].70	$1.04								
[illegible]	[illegible]	[illegible]851.30												
[illegible]		1,252.00	[illegible]	6"	1[illegible]	1.04								
[illegible]	6"	1,043.20	[illegible]	6"	[illegible]	1.04								
[illegible]		1,201.30	[illegible]	6"	1[illegible]	1.04								
		[illegible],344.20			6[illegible]									
[illegible]	4"	44[illegible]	[illegible]											
[illegible]	4"	4[illegible]												
		879.10												
[illegible]		1[illegible]	[illegible]									6"	23.27	$2.20
[illegible]		[illegible]	[illegible]					25.52	$1.06			6"	119.23	2.20
[illegible]		[illegible]										6"	144.85	2.20
[illegible]		[illegible]		6"	[illegible]	$[illegible]		2.00	1.06					
[illegible]							6"	36.60	1.06			6"	224.57	2.20
[illegible]							6"	13.14	1.06			6"	219.65	2.20
		[illegible]						98.26					931.57	

Name of Block	Granite Block Paving, City, Base	Granite Block Paving, City, Filler	Granite Block Paving, City, Area	Granite Block Paving, City, Price	Granite Block Paving, Railway, Base	Granite Block Paving, Railway, Filler	Granite Block Paving, Railway, Area	Granite Block Paving, Railway, Price	Granite Block Repaving, City, Base	Granite Block Repaving, City, Filler	Granite Block Repaving, City, Area	Granite Block Repaving, City, Price	Granite Block Repaving, Railway, Base	Granite Block Repaving, Railway, Filler	Granite Block Repaving, Railway, Area	Granite Block Repaving, Railway, Price
													6"	Cement	38.30	$3.50
													6"	Cement	78.70	3.50
															117.00	
Mt. Airy					6"	Cement	720.30	$3.16								
							720.30									
Harris	4"	Cement	1,165.20	$2.07												
Harris and Mt. Airy	6"	Cement	3,562.70	3.16	6"	Cement	3,251.50	$3.20								
			4,727.90				3,251.50									

Total Areas of Improved Paving, City Area	Total Areas of Improved Paving, Railway Area	Total Areas of Improved Paving, Combined Area.	Record Dates, Date of Contract.	Record Dates, Date of Starting.	Record Dates, Date of Complet'n.	Record Dates, Guaranty Expires.	Record Dates, Assigned to City Eng Dept	Record Dates, Assigned to Appeal Tax Court.	Remarks and Intersecting Streets
4,117.00		4,117.00	5-1-12	8-8-12	12-11-12	2-19-18	2-19-13	11-1-12	
1,575.10		1,575.10	5-1-12	8-8-12	12-11-12	2-19-18	2-19-13	11-1-12	
37,693.90	763.10	38,457.00	5-1-12	6-17-12	12-11-12	2-19-18	2-19-13		
2,089.50	1,230.50	3,320.00	5-1-12	3-26-13	7-11-13	8-27-18	8-27-13	7-17-13	Biddle street
1,709.60		1,709.60	5-1-12	3-26-13	7-11-13	8-27-18	8-27-13	7-17-13	
8,530.60		8,530.60	5-1-12	4-7-13	7-1-13	8-27-18	8-27-13	7-17-13	Federal street
310.50	161.10	471.60	5-1-12	4-7-13	7-1-13	8-27-18	8-27-13	7-17-13	
14,708.42		14,708.42	5-1-12	3-17-13	6-3-13	8-27-18	8-27-13	7-17-13	Gay street, A[illegible] avenue, Eager, Cra[illegible] B[illegible] [illegible] O[illegible] and Federal streets.
366.24	69.40	435.7[illegible]	5-1-12	3-17-13	6-3-13	8-27-18	8-27-13	7-17-13	
282.44	138.74	421.18	5-1-12	3-17-13	6-3-13	8-27-18	8-27-13	7-17-13	
2,709.90		2,709.90	5-1-12	11-19-12	1-15-13	8-27-18	8-27-13	5-20-13	
1,317.10	1,136.55	2,453.65	5-1-12	9-9-12	1-17-13	8-27-18	8-27-13	1-1-13	
2,016.90	1,805.05	3,821.95	5-1-12	9-9-12	1-17-13	8-27-18	8-27-13	1-1-13	Greene street.
598.94	163.80	732.74	5-1-12	9-17-12	5-3-13	8-27-18	8-27-13	1-1-13	
1,955.26		1,955.26	5-1-12	9-17-12	5-3-13	8-27-18	8-27-13	1-1-13 5-20-13	Lombard street.
4,622.00		4,622.00	5-1-12	3-3-13	5-10-13	8-27-18	8-27-13	5-20-13	Baltimore, Fayette and Lexington streets.
198.60	101.10	299.70	5-1-12	3-3-13	5-10-13	8-27-18	8-27-13	5-20-13	
41,386.00	4,806.30	46,192.30	5-1-12	9-9-12	7-11-13	8-27-18	8-27-13		
1,630.90		1,030.90	4-29-12	7-17-12	8-28-12	8-27-18	8-27-13	9-1-12	
								1-1-13	
5,216.80	3,969.70	9,186.50	4-29-12	9-27-12	7-12-13	8-27-18	8-27-13		
								7-17-13	
1,252.00	1,006.80	2,258.80	4-29-12	9-27-12	7-12-13	8-27-18	8-27-13	7-17-13	
1,043.20	919.30	1,962.50	4-29-12	9-27-12	7-12-13	8-27-18	8-27-13	7-17-13	
1,201.30	1,095.30	2,296.60	4-29-12	9-27-12	7-12-13	8-27-18	8-27-13	7-17-13	
10,344.20	[illegible],091.10	17,[illegible]	4-29-12	7-17-12	7-12-13	8-27-18	8-27-13		
1,165.20		1,165.20	5-3-12	5-29-12	6-22-12	9-4-17	9-4-12	9-1-12	
3,562.70	3,251.50	6,814.20	5-3-12	5-31-12	12-23-12	9-4-17	9-4-12	9-1-12	
4,727.90	3,251.50	7,[illegible]	5-3-12	5-30-12	12-23-12	9-4-17	9-4-12		
447.70		447.70	4-30-12	5-2-12	5-31-12	[illegible]	7-19-12	8-1-12	
431.40		431.40	4-30-12	4-29-12	5-2[illegible]-12	7-1[illegible]	7-19-12	8-1-12	
879.10		[illegible]	[illegible]	4-29-12	5-[illegible]-12	7-[illegible]	7-19-12		
1,45[illegible].51		1,4[illegible].51	7-11-12	8-7-12	[illegible]-12	2-12-18	2-12-13	10-1-12	
4,5[illegible].[illegible]4		4,[illegible].[illegible]4	7-11-12	[illegible]	10-[illegible]	2-12-18	2-12-13	11-1-12	[illegible] and L[illegible]
1,0[illegible]2.58		1,[illegible].58	7-11-12	8-15-12	11-4-12	2-12-18	2-12-13	10-1-12	
3,092.97	58.97	3,1[illegible].94	7-11-12	[illegible]-12	12-1[illegible]-12	2-12-18	2-12-13	12-1-12	M[illegible]
3,103.37		3,[illegible].37	7-11-12	[illegible]-12	11-[illegible]-12	2-12-18	2-12-13	12-1-12	[illegible]
5,450.[illegible]7		5,[illegible]	[illegible]	11-1-12	12-31-12	2-12-18	2-12-13	1-1-13	Chase street
10,[illegible]58.14	58.97	10,[illegible]	[illegible]	8-7-12	12-31-12	2-12-18	2-12-13		

TABLE 3 (Continued)—STATEMENT OF LENGTHS, WIDTHS AND AREAS OF

Contract Number	Contractor	Assistant Engineer in Charge	Name of Improved Street	From	To	Measurements: Width, Feet	Measurements: Length of Streets, Feet	Length of Streets, Miles	Lengths of Returns, Feet	Lengths of Returns, Miles	Miles Av'g 30 Ft Wide	Sheet Asphalt Paving: Name of Asphalt	Depth of Topping	City: Base	City: Area	City: Price	Railway: Base	Railway: Area	Railway: Price	Bituminous Concrete Paving: Name of Asphalt	Depth of Surface	City: Base	City: Area	City: Price	Railway: Base	Railway: Area	Railway: Price	Wood Block Paving: Name of Block	City: Base	City: Filler	City: Area	City: Price	Railway: Base	Railway: Filler	Railway: Area	Railway: Price	[illegible]	[illegible]	[illegible]
21	M J Beach	Noland	Dover st	E B L Eutaw st	W C L Sharp st	12 00 16 02 20 35	140 95 437 40 133 55	.14			.07																												
			Lemmon st	E B L Fremont ave	W B L Greene st	12 05 15.80 20.10	225 85 374.35 434.80	.19			.11																												
	Total contract						1,755.90	.33			.18																												
22	M J Beach	Noland	German st	E B L Fremont ave	E. B L. Penn st	35.20	717.35	.14	35.80	.01	.16																												
23	M J Beach	Noland	Forrest st	N B L Lexington st	N C L Orleans st	23.55	518.25	.10	46.20	.01	.08																												
			Market Space	At intersection of Forrest and Orleans sts		54.00	99.20	.02			.04																												
	Total contract						617.45	.12	46.20	.01	.12																												
24	P F Reddington & Sons	Crozier	Guilford ave	N B L Lanvale st	S B L North ave.	36 09	759 40	.14	73 45	.01	.18																												
25	John E Quinn	Noland.	Paca st	N B L Pratt st.	S. B. L. Baltimore st	48 60	1,025.40	.19	148.50	.03	.32																												
26	M J. Beach	Noland and Painter	Central ave., e. side	N. B. L. Pratt st.	S B L Granby st	74.05	(½) 220.74	.02	12.40	.00	.06																												
			Central ave., w. side.	N B L Granby st	N B L Fayette st	73 85	(½) 988 32	.09	50 40	.01	23																												
			Central ave	N B L Fayette st	N C L Orleans st	73.72	805 15	17	153 70	.03	.43																												
			Central ave	N. C. L. Orleans st.	S side Gay st.	41.64	1,463 30	.28	154 30	.03	.40																												
			Central ave	N. side Gay st.	S B L Oliver st	41.74	2,784.45	.53	240.99	05	.74																												
	Total contract						5,747.43	1.09	611 79	.12	1.86																												
27	John E Quinn	Painter	Central ave	Nr Nt Fleet st	S B L Fawn st	73.63	1,016.70	.19	102.70	.02	.48																												
			Central ave., e. side.	S. B. L. Fawn st.	S. B. L. Pratt st.	74.12	(½) 574.12	.05	23.70	.01	.13																												
			Central ave., e. side.	S B L Pratt st	N B L Pratt st	74.20	(½) 54 02	.01	13 12	00	.02																												
	Total contract						1,330.77	.25	139 52	.03	.63																												
28	Eastern Cement Gun C[illegible] F[illegible] Schneider Paving Co.	Smith	Kenwood ave	N B L Baltimore st	S B L Fairmount ave	42 03	334.20	.06	8.30	.00	.09									Mexico	1½"	Cobble	1,570 04	$0.80															
29	Cunningham Paving and Construction Co.	Painter	Fayette street	E. B. L. Poppleton st.	W B L Pine st.	39 00	1,388.62	.26	27.40	.01	33																												
			Lexington st	E. B. L. Aisquith st.	W B L Central ave	35 15	467.25	09	12.40	00	.10																												
	Total contract						1,855.87	.35	39.80	.01	.43																												
30	P F Reddington & Sons	Painter	Balderston st	E. B. L. Charles st.	W B L Light st	24.60	311.15	.06			.05																												
			Perry st	E. C. L. Bedford st.	W B L Charles st	18.02	159.20	.03			.02																												
	Total contract						470.35	.09			07																												
31	F. E. Schneider Paving Co.	Crozier	Linden ave	N B L Dolphin st	S B L North ave	38 74	3,103.00	.59	154.53	03	.75	Mexican and Bermudez.	2"	6"	5,852.24	$1 68	6"	1,026.80	$1 68																				
			Presstman st	E C L Linden ave	S B L North ave	39 50	52.10	01			.01	Mexican and Bermudez	2"	6"	212.53	1 68																							
			Park ave	S B L Lanvale st	S B L Lafayette ave	38 80	399 20	.07	22.70	.00	.10	Bermudez	2"	6"	832.26	1 68	6"	132 91	1 68																				
	Total contract						3,554 30	67	177.23	03	86				6,897.03			1,159.71																					
32	United States Asphalt [illegible]	Noland and Crozier	Castle st	N B L Fayette st	S B L Madison st	30 12	1,753.20	.33	105 30	02	.35	Aztec	2"	6"	5,449.40	$1 65																							
			Castle st	S. B. L. Monument st.	N B L Monument st	30 10	65.00	.01	19 30	.00	.02																												
			Lanvale st.	E. B L Madison ave.	W B L Eutaw Pl	38 80	289 20	.06	27 60	01	.07	Aztec	2"	6"	1,149 40	1 65																							
			Lanvale st	E B L Linden ave.	W B L Park ave	39 05	645.80	.12	58 30	01	.16	Aztec	2"	6"	2,621.60	1 65																							

MATERIALS USED ON PAVING DONE BY CONTRACT FOR THE PAVING COMMISSION.

Name of Block	Vitrified Block Paving						Vitrified Block Repaving					Vitrified Block Gutter			Name of Block	Granite Block Paving								Granite Block Repaving								Total Areas of Improved Paving.			Record Dates						Remarks and Intersections Omitted
	City			Railway			City		City and Railway Price	Railway		City				City				Railway				City				Railway													
	Base	Area	Price	Base	Area	Price	Base	Area		Base	Area	Base	Area	Price		Base	Filler	Area	Price	Base	Filler	Area	Price	Base	Filler	Area	Price	Base	Filler	Area	Price	City Area	Railway Area	Combined Area	Date of Contract	Date of Starting	Date of Complet'n	Guaranty Expires	Assigned to City Eng Dept.	Assigned to Appeal Tax Court	
	6"	1,283.80	$2.06																													1,283.80		1,283.80	6-25-12	10-8-12	11-11-12	12-10-17	12-10-12	12-1-12	Howard street
	6"	1,941.60	2.06																													1,941.60		1,941.60	6-25-12	9-9-12	11-1-12	12-10-17	12-10-12	11-1-12	Penn street
		3,225.40																														3,225.40		3,225.40	6-25-12	9-9-12	11-11-12	12-10-17	12-10-12		
	6"	2,901.60	$2.08																													2,901.60		2,901.60	6-25-12	8-1-12	10-18-12	11-6-17	11-6-12	11-1-12	
	6"	1,339.20	$2.08																													1,339.20		1,339.20	6-25-12	7-15-12	8-20-12	9-11-17	9-11-12	9-1-12	
	6"	780.30	2.08																													780.30		780.30	6-25-12	7-15-12	8-20-12	9-11-17	9-11-12	9-1-12	
		2,119.50																														2,119.50		2,119.50	6-25-12	7-15-12	8-20-12	9-11-17	9-11-12		
	6"	1,595.00	[illegible]	6"	1,512.05	$2.14																										1,595.00	1,512.05	3,107.05	7-10-12	9-30-12	11-21-12	1-31-18	1-31-13	12-1-12	
															Woodstock	6"	Cement	3,542.80	$3.15	6"	Cement	2,161.50	$3.15									3,542.80	2,161.50	5,704.30	7-12-12	8-14-12	10-7-12	12-6-17	12-6-12	10-1-12	
		713.84	$1.95												Mt. Airy to Richmond					6"	Bit.	257.68	$3.45									713.84	257.68	971.52	7-22-12	10-9-12	8-5-13	10-8-18	10-8-13	7-17-13	Baltimore street
	6"	3,186.62	1.95																	6"	Bit.	917.14	3.45									3,186.62	917.14	4,103.76	7-22-12	10-9-12	8-5-13	10-8-18	10-8-13	7-17-13	
Baltimore.	6"	5,277.97	1.95	6"	[illegible]	$2.03														6"	Bit.	1,980.80	3.45									5,277.97	2,300.36	7,578.33	7-22-12	10-9-12	8-5-13	10-8-18	10-8-13	7-17-13	
	6"	5,743.52	1.95	6"	121.39	2.03														6"	Bit.	1,218.09	3.45									5,743.52	1,339.48	7,083.00	7-22-12	10-9-12	8-5-13	10-8-18	10-8-13	5-20-13 1-1-13	
	6"	[illegible]	[illegible]	6"	[illegible]	[illegible]																										7,381.50	5,647.52	13,029.02	7-22-12	10-9-12	8-5-13	10-8-18	10-8-13	5-20-13 1-1-13	Chase and Preston streets
		22,303.45																				4,373.71										22,303.45	10,462.18	32,765.63	7-22-12	10-9-12	8-5-13	10-8-18	10-8-13		
															Richmond, Mt. Vernon and Guilford	6"	Cement	7,153.56	$3.16	6"	Bit.	1,343.17	$3.25					6"	Cement	16.44	$2.10	7,153.56	1,359.61	8,513.17	8-31-12	6-16-13	10-27-13	10-29-18	10-29-13	9-30-13	
																6"	Cement	1,734.49	3.16	6"	Bit.	632.19	3.25									1,734.49	632.19	2,366.68	8-31-12	6-16-13	10-27-13	10-29-18	10-29-13	9-30-13	
																6"	Bit.	128.61	[illegible]	6"	Bit.	149.33	3.25									128.61	149.33	277.94	8-31-12	6-16-13	10-27-13	10-29-18	10-29-13	9-30-13	
																		9,016.66				2,124.69								16.44		9,016.66	2,141.13	11,157.79	8-31-12	6-16-13	10-27-13	10-29-18	10-29-13		
																																1,570.04		1,570.04	*	7-17-12	10-10-12	11-7-17	11-7-12	8-1-13	[illegible]
	6"	3,000.85	$2.05		617.17	$2.14																						6"	Cement	2,178.67	$1.25	3,000.85	2,795.84	5,796.69	7-22-12	9-10-13	12-31-13	2-4-19	2-4-14	2-2-14	[illegible]
		[illegible]	2.05	6"	[illegible]	2.14																										819.01	943.47	1,762.48	[illegible]	[illegible]	[illegible]	[illegible]	2-4-14	9-30-13	
		3,819.86			1,560.64																									2,178.67		3,819.86	3,739.31	7,559.17	7-22-12	[illegible]	[illegible]	[illegible]	2-4-14		
															Woodstock	[illegible]	Cement	858.83	$3.49													858.83		858.83	7-22-12	11-11-12	12-2-12	[illegible]	1-13-13	12-1-12	
															Woodstock	6"	Cement	315.66	3.30													315.66		315.66	7-22-12	11-23-12	12-12-12	[illegible]	1-13-13	12-1-12	
																		1,174.49														1,174.49		1,174.49	7-22-12	11-11-12	12-2-12	[illegible]	1-13-13		
	6"	[illegible]	$2.10	6"	[illegible]	$2.10						6"	[illegible]	$2.10																		6,842.03	6,284.05	13,126.08	[illegible]	10-27-12	1-2-13	7-23-18	7-23-13	7-1-13	[illegible]
				6"	[illegible]	2.10						6"	[illegible]	2.10																		228.66		228.66	[illegible]	10-27-12	1-2-13	7-23-18	7-23-13	1-1-13	
												6"	[illegible]	2.10																		958.38	794.79	1,753.17	[illegible]	[illegible]	3-20-13	7-23-18	7-23-13	[illegible]	
		[illegible]			[illegible]								1,117.48																			8,029.07	7,078.84	15,107.91	[illegible]	10-27-12	3-20-13	7-23-18	7-23-13		
		[illegible]	$2.25				6"	14.00	[illegible]			6"	508.30	$2.25																		6,109.80		6,109.80	8-5-12	9-9-12	11-20-12	[illegible]	12-3-13	12-1-12	[illegible]
		[illegible]	2.25																													301.70		301.70	8-5-12	9-9-12	11-20-12	[illegible]	12-3-13	12-1-12	
		54.50	2.25									6"	96.40	2.25																		1,300.30		1,300.30	8-5-12	10-15-12	11-20-12	[illegible]	12-3-13	12-1-12	
		[illegible]	2.25									6"	223.60	2.25																		2,884.60		2,884.60	8-5-12	10-21-12	11-26-12	12-3-18	12-3-13	12-1-12	Bolton street

TABLE 3 (Continued)—STATEMENT OF LENGTHS, WIDTHS AND AREAS OF

Contract Number	Contractor	Assistant Engineer in Charge	Name of Improved Street	From	To	Measurements.						Sheet Asphalt Paving.								Bituminous Concrete Paving.								Wood Block Paving.									[illegible]		
						Width.	Length of Streets.		Lengths of Returns.		Miles Avg 30 Ft Wide	Name of Asphalt	Depth of Topping	City.			Railway.			Name of Asphalt	Depth of Surface	City.			Railway.			Name of Block	City.				Railway.				[illegible]		
						Feet	Feet.	Miles	Feet.	Miles				Base.	Area.	Price.	Base.	Area	Price.			Base.	Area.	Price.	Base.	Area.	Price.		Base	Filler	Area	Price.	Base.	Filler.	Area	Price	Base	[illegible]	[illegible]
			McCulloh st.	N. B. L. Lafayette ave.	S. B. L. North ave.	35.85	3,344.05	.63	181.80	.03	.80	Aztec	2"	6"	12,927.90	$1.65																							
			McCulloh st.	S. B. L. McMechen st.	N. B. L. McMechen st.	35.95	66.10	.01	29.10	.01	.02																												
			Mulberry st.	E. C. L. Monroe st.	W. B. L. Fulton ave.	30.15	447.45	.09	21.10	.00	.09	Aztec	2"	6"	1,349.30	1.65																							
			Park ave.	N. B. L. Lafayette ave.	S. B. L. McMechen st.	38.50	727.20	.14	25.70	.01	.19	Aztec	2"	6"	3,023.44	1.65																							
			McMechen st.	N. W. B. L. Park ave.	N. E. B. L. Park ave.	38.52	150.40	.03	21.40	.00	.04																												
			Richmond st.	E. B. L. Howard st.	W. B. L. Cathedral st.	38.80	942.50	.18	59.80	.01	.25	Aztec	2"	6"	3,870.70	1.65	6"	22.70	$1.65																		[illegible]	[illegible]	[illegible]
	Total contract						8,430.90	1.60	549.40	.10	1.99				30,391.74			22.70																				[illegible]	
33	Consolidated Engineering Co.	Painter	East st.	N. B. L. Low st.	S. B. L. Front st.	30.25 37.70	297.00 686.63	.19			.22																												
			Front st.	N. B. L. Lombard st.	S. B. L. Baltimore st.	20.72 29.80	468.60 122.30	.11	15.25	.00	.09																												
			Plowman st.	S. W. B. L. Front st.	N. E. B. L. Front st.	28.40	76.28	.02			.01																												
			Granby st.	E. wall Jones Falls	W. B. L. Exeter st.	30.03	830.85	.16	37.10	.01	.16																												
			Low st.	E. B. L. East st.	W. B. L. Aisquith st.	19.50	767.75	.15	20.40	.00	.10																												
	Total contract						3,249.41	.62	72.75	.01	.58																												
34	Cunningham Paving and Construction Co.	Crozier	Exeter st.	N. B. L. Lombard st.	S. B. L. Baltimore st.	29.37	450.50	.08	39.55	.01	.09																												
			Exeter st.	N. B. L. Fayette st.	S. B. L. Low st.	31.05	953.95	.18	21.70	.00	.18																												
			Exeter st.	N. B. L. Gay st.	S. B. L. Front st.	31.04 42.10	456.80 351.50	.15	10.80	.00	.18																												
			Monument st.	E. B. L. Fallsway	E. C. L. alley east of Buren st.	30.14	242.45	.05	27.20	.01	.06																												
			Monument st.	E. C. L. alley east of Buren st.	W. B. L. Ensor st.	30.20	1,302.20	.25	71.05	.01	.34																												
	Total contract						3,757.40	.71	170.30	.03	.85																												
35	P. F. [illegible] & Son	Willhar	Buren st.	N. B. L. Madison st.	N. B. L. Truxton st.	24.65 33.60	42.98 550.42	.11	12.00	.00	.13																												
			Colvin st.	N. B. L. Gay st.	S. B. L. Front st.	38.42	750.95	.14			.18																												
			Truxton st.	N. B. L. Buren st.	E. side Warden st.	36.20	130.40	.03			.03																												
			Warden st.	N. C. L. Truxton st.	S. B. L. Eager st.	30.05	250.10	.05			.05																												
	Total contract						1,724.85	.33	12.00	.00	.39																												
36	Cunningham Paving and Construction Co.	Crozier	Front st.	N. B. L. Hillen st.	W. side High st.	30.30 21.70 44.70	185.60 274.55 157.77	.12	7.00	.00	.12																												
			Front st.	E. C. L. Exeter st.	80 ft. east of N. E. corner Colvin st.	23.42	301.80	.05	7.95	.00	.05																												
			Front st.	80 east of N. E. corner Colvin st.	W. side Forrest st.	23.42 33.05	412.25 17.60	.08	9.75	.00	.07																												
			Exeter st.	S. E. B. L. Front st.	N. E. B. L. Front st.	42.20	47.70	.01			.01																												
			High st.	N. B. L. Hillen st.	S. B. L. Front st.	44.50 37.10	324.30 39.20	.07			.10																												
	Total contract						1,760.77	.33	24.70	.00	.35																												

MATERIALS USED ON PAVING DONE BY CONTRACT FOR THE PAVING COMMISSION.

	Vitrified Block Paving						Vitrified Block Repaving					Vitrified Block Gutter.				Granite Block Paving								Granite Block Repaving.								Total Areas of Improved Paving.			Record Dates.						
	City			Railway			City.			Railway.		City.				City.				Railway.				City.				Railway.													
Name of Block	Base	Area	Price	Base	Area	Price	Base	Area.	City and Railway, Price	Base.	Area	Base	Area.	Price.	Name of Block	Base.	Filler.	Area.	Price.	Base	Filler.	Area.	Price.	Base.	Filler.	Area.	Price.	Base.	Filler.	Area.	Price.	City Area.	Railway Area.	Combined Area	Date of Contract.	Date of Starting.	Date of Complet'n	Guaranty Expires	Assigned to City Eng Dept.	Assigned to Appeal Tax Court.	Remarks and Intersections Omitted
												6"	1,074.50	$2.25																		14,002.40		14,002.40	8-5-12	10-18-12	1-6-13	12-3-18	12-3-13	1-1-13	McMechen street.
Te[illegible]	6"	[illegible]	$2.25	6"	130.20	$2.25																										261.00	130.20	391.20	8-5-12	10-18-12	1-6-13	2-3-18	12-3-13	1-1-13	
[illegible]	6"	[illegible]	2.25									6"	148.00	2.25																		1,526.00		1,526.00	8-5-12	10-26-12	12-4-12	12-3-18	12-3-13	1-1-13	
												6"	237.83	2.25																		3,261.27		3,261.27	8-5-12	4-17-13	6-16-13	12-3-18	12-3-13	7-17-13	
F[illegible] and Bessemer	6"	481.79	2.25	6"	303.67	2.25																										481.79	303.67	785.46	8-5-12	4-17-13	6-16-13	12-3-18	12-3-13	7-17-13	
[illegible]	6"	[illegible]	2.25	6"	[illegible]	2.25						6"	201.50	2.25																		4,181.50	135.80	4,317.30	8-5-12	9-12-12	11-8-12	12-3-18	12-3-13	12-1-12	
		1,273.39			38.97			64.00					2,581.03																			34,310.36	569.67	34,880.03	8-5-12	9-12-12	6-16-13	12-3-18	12-3-13		
[illegible]	6"	3,849.22	$2.09																													3,849.22		3,849.22	7-22-12	8-17-12	11-11-12	9-17-18	9-17-13	11-1-12	Gay, Ensor and Hillen streets
[illegible]	6"	[illegible]	2.09																													1,513.51		1,513.51	7-22-12	10-17-12	8-21-13	9-17-18	9-17-13	5-20-13	Plowman street
[illegible]	6"	242.32	2.09																													242.32		242.32	7-22-12	10-17-12	8-21-13	9-17-18	9-17-13	5-20-13	
[illegible]	6"	[illegible]	2.09	6"	48.25	[illegible]																										2,812.29	48.25	2,860.54	7-22-12	3-10-13	6-7-13	9-17-18	9-17-13	7-17-13	High street
[illegible]	6"	1,694.66	2.09																													1,694.66		1,694.66	7-22-12	10-7-12	12-18-12	9-17-18	9-17-13	12-1-12	Forrest street
		10,112.00			48.25																											10,112.00	48.25	10,160.25	7-22-12	8-7-12	8-21-13	9-17-18	9-17-13		
															Mt Airy	6"	Cement	1,540.16	$3.12													1,540.16		1,540.16	8-23-12	4-29-13	6-26-13	1-14-19	1-14-14	7-17-13	
															Mt Airy	6"	Cement	3,210.27	3.12													3,210.27		3,210.27	8-23-12	11-20-12	6-4-13	1-14-19	1-14-14	7-17-13 5-20-13	Lexington street
															Mt Airy	6"	Cement	2,800.28	3.12	6"	Bit.	*64.09	$3.32					6"	Bit.	**367.32	$1.65½	2,800.28	431.41	3,231.69	8-23-12	11-2-12	4-29-13	1-14-19	1-14-14	1-1-13 5-20-13	Hillen street
															Mt Airy	6"	Cement	878.14	3.12	6"	Cement	271.21	3.12									878.14	271.21	1,149.35	8-23-12	5-26-13	12-22-13	1-14-19	1-14-14	2-2-14	
															Mt Airy	6"	Cement	4,278.74	3.12	6"	Bit.	1,613.15	3.32									4,278.74	1,613.15	5,891.89	8-23-12	5-20-13	12-22-13	1-14-19	1-14-14	10-11-13 10-11-13	Greenmount and [illegible] avenue
																		12,707.59				1,948.45								367.32		12,707.59	2,315.77	15,023.36	8-23-12	11-2-12	12-22-13	1-14-19	1-14-14		
M[illegible]	6"	[illegible]	2.11																													2,219.37		2,219.37	8-22-12	9-26-12	12-12-12	8-20-18	8-20-13	1-1-13	
M[illegible]	6"	[illegible]	2.11																													3,214.54		3,214.54	8-22-12	3-10-13	4-30-13	8-20-18	8-20-13	5-20-13	Hillen street.
[illegible] and M[illegible]	6"	[illegible]	2.11																													524.63		524.63	8-22-12	9-28-12	12-11-12	8-20-18	8-20-13	1-1-13	
[illegible]	6"	[illegible]	2.11																													841.46		841.46	8-22-12	10-[illegible]-12	12-12-12	8-20-18	8-20-13	1-1-13	
		[illegible]																														6,800.00		6,800.00	8-22-12	9-26-12	4-30-13	8-20-18	8-20-13		
															Mt Airy	6"	Bit.	1,654.95	$3.27	6"	Bit.	443.72	$3.77	6"	Bit.	*103.33	$1.45[illegible]					1,758.28	443.72	2,202.00	8-23-12	10-17-12	8-20-13	10-8-18	10-8-13	1-1-13 8-28-13	
															Mt. Airy...	6" 6"	Bit. Cement	816.89 5.18	3.27 3.12													822.07		822.07	8-23-12	10-1-12	3-24-13	10-8-18	10-8-13	11-1-12	
															Mt Airy	6"	Cement	1,182.93	3.12													1,182.93		1,182.93	8-23-12	10-1-12	3-24-13	10-8-18	10-8-13	11-1-12	
															Mt Airy	6"	Bit.	249.95	3.27													249.95		249.95	8-23-12	10-1-12	3-24-13	10-8-18	10-8-13	11-1-12	
															Mt Airy	6"	Bit.	1,215.48	3.27	6"	Bit	*553.74	3.27									1,215.48	553.74	1,769.22	8-23-12	6-24-13	9-12-13	10-8-18	10-8-13	9-30-13	
																		5,125.38				997.46				103.33						5,228.71	997.46	6,226.17	8-23-12	10-1-12	9-12-13	10-8-18	10-8-13		

TABLE 3 (Continued)—STATEMENT OF LENGTHS, WIDTHS AND AREAS OF

Contract Number	Contractor	Assistant Engineer in Charge	Name of Improved Street	From	To	Measurements						Sheet Asphalt Paving								Bituminous Concrete Paving								Wood Block Paving									[illegible]		
						Width	Length of Streets		Lengths of Returns		Miles Avg. 30 Ft. Wide	Name of Asphalt	Depth of Topping	City			Railway			Name of Asphalt	Depth of Surface	City			Railway			Name of Block	City				Railway				[illegible]		
						Feet	Feet	Miles	Feet	Miles				Base	Area	Price	Base	Area	Price			Base	Area	Price	Base	Area	Price		Base	Filler	Area	Price	Base	Filler	Area	Price	Base	Area	Price
37	Elder Paving and Contracting Co.	Painter	Bolton st	N. B. L. Lafayette ave.	S. B. L. North ave	38.83	1,001.03	.37	40.25	.01	.48									Texico	2"	4"	7,678.08	$1.51															
			Bolton st	S. B. L. McMechen st	N. B. L. McMechen st	38.65	62.10	.01	25.55	.01	.02																												
			Mosher st	E. B. L. McCulloh st	W. B. L. Park ave	38.50	1,547.22	.29	175.15	.03	.39									Texico	2"	4"	6,343.67	1.51															
	Total contract						3,510.35	.67	240.95	.05	.89												14,021.75																
38	G. Long Contracting Co.	Crozier	Davis st	N. B. L. Lexington st	N. B. L. Bath st	30.20 24.88 34.45	31.35 380.40 800.55	.23	44.65	.01	.23																												
			Frederick st	N. B. L. Pratt st	S. B. L. Lexington st	28.00	1,433.45	.27	52.05	.01	.26																												
			Water st	E. side Gay st	W. B. L. Frederick st	30.20	175.90	.03			.03																												
			Water st	E. B. L. Frederick st	W. B. L. Market Pl.	30.00	234.95	.05			.05																												
	Total contract						3,056.60	.58	96.70	.02	.57																												
39	G. Long Contracting Co.	Painter	[illegible] st	S. B. L. [illegible] st	N. side bridge over B. & O. R. R.	38.90	390.40	.07			.10																												
			Mt. Vernon Pl., s. s.	E. side Charles st	W. B. L. St. Paul st	31.50	338.35	.07			.07																												
			Mt. Vernon Pl., n. s.	E. side Charles st	W. B. L. St. Paul st	31.43	335.50	.06			.06																												
			[illegible] st	N. B. L. Baltimore st	S. B. L. Fayette st	36.50	430.40	.08	53.40	.01	.11																												
	Total contract						1,494.65	.28	53.40	.01	.34																												
40	Standard Contracting Co.	Painter	[illegible] st	N. B. L. [illegible] st	S. B. L. Pratt st	12.00 36.10	1,740.30 209.40	.39	32.50	.00	.17																												
			Brentwood st	N. B. L. Biddle st	S. B. L. Preston st	39.45 48.90	80.65 250.15	.06	39.80	.01	.10																												
			[illegible] st [illegible] st	E. B. L. [illegible] way [illegible] McCulloh	W. B. L. Front st N. W. B. L. Park	[illegible]	1,472.07	.28	101.15	.04	.36																												
	Total contract						3,843.47	.73	263.45	.05	.63																												
41	[illegible]	Smith and Crozier	[illegible] st	N. B. L. Pratt st	S. B. L. Lombard	42.55	357.00	.07	42.30	.01	.10									Aztec	2"	4"	1,568.35	$1.44															
			[illegible] ave	S. B. L. Pratt st	S. B. L. Baltimore	41.02	713.55	.13	111.50	.02	.20									Aztec	2"	4"	3,084.00	1.44															
			Lombard st	E. B. L. Washington st	E. B. L. Chester st	[illegible]	423.35	.08	23.00	.00	.10									Aztec	2"	4"	1,601.38	1.44															
			[illegible] st	W. B. L. Cathedral st	W. B. L. Charles	38.05	348.85	.07	32.85	.01	.09									Aztec	2"	6"	1,477.00	[illegible]															
	Total contract						1,842.75	.35	209.65	.04	.49												7,730.73																
42	P. F. [illegible]	Smith	[illegible] st	N. B. L. Pratt st	S. B. L. Water st	39.90	466.80	.09			.11																												
			[illegible] st	E. B. L. Penn st	W. B. L. Paca st	35.72	935.80	.18	38.00	.01	.22																												
			[illegible] st	W. B. L. Constitution st	W. B. L. [illegible]	31.70 29.50 37.10	177.45 66.00 410.75	.12	43.30	.01	.16																												
	Total contract						2,056.80	.39	81.30	.02	.49																												
43	M. J. [illegible]	Crozier	Fayette st	E. B. L. Broadway	E. side Luzerne st	[illegible]	3,545.78	.67	317.65	.10	.98																												

MATERIALS USED ON PAVING DONE BY CONTRACT FOR THE PAVING COMMISSION.

	Vitrified Block Paving						Vitrified Block Repaving.					Vitrified Block Gutter.				Granite Block Paving.								Granite Block Repaving								Total Areas of Improved Paving.			Record Dates.						
	City.			Railway.			City			Railway		City.				City.				Railway.				City.				Railway.													
Name of Block	Base.	Area	Price.	Base	Area	Price.	Base.	Area.	City and Railway, Price	Base	Area.	Base.	Area	Price	Name of Block	Base	Filler	Area.	Price.	Base.	Filler.	Area.	Price.	Base	Filler.	Area	Price.	Base.	Filler.	Area	Price.	City Area.	Railway Area.	Combined Area.	Date of Contract	Date of Starting.	Date of Complet'n	Guaranty Expires.	Assigned to City Eng Dept.	Assigned to Appeal Tax Court.	Remarks and Intersections Omitted
[illegible]	6"	[illegible]	$2.30									4"	654 32	$2.10																		8,347.72		8,347.72	9-10-12	10-10-12	1-4-13	2-12-18	2-12-13	12-1-12	Mosher, McMechen and Wilson streets
[illegible]	6"	[illegible]	2.30	6"	[illegible]	$2.50						4'	362 74	2.10																		235.65	128.07	363.72	9-10-12	10-10-12	1-4-13	2-12-18	2-12-13	12-1-12	
[illegible]		[illegible]	2.30																													6,973.98		6,973.98	9-10-12	11-10-12	12-28-12	2-12-18	2-12-13	1-1-13	Madison avenue Eutaw Place and Linden avenue
		[illegible]			[illegible]								1,217 06																			15,557 35	128 07	15,685 42	9-10-12	10-10-12	1-4-13	2-12-18	2-12-13		
[illegible]	[illegible]	6 11	$2.10												Richm'd & Woodstock	6"	Cement	3,925 20	$3 12	6"	Cement	75 93	$3.65	6"	Cement	75 52	$1 22					4,006.83	75 93	4,082 76	10-15-12	3-21-13	6-26-13	7-2-18	7-2-13	7-17-13	
Bessemer	6"	[illegible]	[illegible]												Woodstock & Guilford	6"	Bit.	4,592 39	3 27													4,593 72		4,593 72	10-15-12	11-16-12	5-10-13	7-2-18	7-2-13	1-1-13 5-20-13	Lombard, Baltimore and Fayette streets
Bessemer	[illegible]	588 25	[illegible]																													588.25		588.25	10-15-12	10-24-12	12-28-12	7-2-13	7-2-13	1-1-13	
															Guilford	6"	Bit.	787 21	3 27													787.21		787.21	10-15-12	10-24-12	12-28-12	7-2-18	7-2-13	1-1-13	
		[illegible]																9,304 80				75 93				75 52						9,976 01	75 93	10,051 94	10-15-12	10-24-12	6-26-13	7-2-18	7-2-13		
[illegible]		[illegible]	[illegible]																													1,695 21		1,695 21	10-15-12	5-10-13	7-19-13	9-10-18	9-10-13	8-28-13	
[illegible]	4"	[illegible]																														1,188 53		1,188 53	10-15-12	11-18-12	12-28-12	9-10-18	9-10-13	1-1-13	
[illegible]	4"	[illegible]	2 02																													1,173 21		1,173 21	10-15-12	11-18-12	12-28-12	9-10-18	9-10-13	1-1-13	
[illegible]		[illegible]		6"	[illegible]	$2 40																										1,729 47	205 87	1,935 34	10-15-12	6-13-13	7-29-13	9-10-18	9-10-13	8-28-13	
		[illegible]			[illegible]																											5,786 42	205 87	5,992 29	10-15-12	11-18-12	7-29-13	9-10-18	9-10-13		
[illegible]	6"	2,910 56	$2 11																													2,910 56		2,910.56	10-31-12	12-2-12	4-5-13	3-11-19	3-11-14	5-20-13	Lancaster, Aliceanna, Fleet streets, Eastern avenue, Bank and Gough streets
[illegible]	[illegible]	1,489 38	[illegible]		[illegible]	$2 11																										1,489 38	288 66	1,778.04	10-31-12	11-11-12	12-10-12	3-11-19	3-11-14	1-1-13	
[illegible]	6"	[illegible]	2 11	6"	[illegible]	2 10																										3,725 13	3,041 90	[illegible]	10-31-12 10-31-12	12-23-13 3-21-13	7-31-13	3-11-19	3-11-14	7-17-13	Under [illegible] paving [illegible] Madison avenue Eutaw Place and Boston street
		[illegible]			3,33[illegible]																											7,725 07	3,330.65	[illegible]	10-31-12	11-11-12	7-31-13	3-11-19	3-11-14		
[illegible]	[illegible]	[illegible]	[illegible]									4"	110 05	$2 18																		1,737 89		1,737.89	11-6-12	5-1-13	6-30-13	7-23-18	7-23-13	7-17-13	Lombard street
	[illegible]	159 70										4"	[illegible]	2 18																		[illegible]		[illegible]	11-6-12	5-1-13	6-30-13	7-23-18	7-23-13	7-17-13	
	[illegible]		2 18									4"	142 58	2 18																		1,748.62		[illegible]	11-6-12	5-1-13	6-30-13	7-23-18	7-23-13	7-17-13	
												6"	107 00	2 35																		1,584.00		1,584 00	11-6-12	11-25-12	1-6-13	7-23-18	7-23-13	1-1-13	
		[illegible]											606 70																			8,551 47		8,551.47	11-6-12	11-25-12	6-30-13	7-23-18	7-23-13		
															Mt Airy Woodstock and Richmond	6"	Cement	1,592 00	$3 29	6"	Cement	428 90	$3 35									1,592.00	428.90	2,020 90	12-30-12	6-11-13	7-31-13	9-24-18	9-24-13	8-28-13	Lombard street
															Woodstock & Richmond	6"	Cement	3,814 30	3 29													3,814.30		3,814 30	12-30-12	5-16-13	7-16-13	9-24-18	9-24-13	8-28-13	Greene street
															Mt Airy Woodstock and Richmond	6"	Cement	2,744 30	3 29													2,744 30		2,744 30	12-30-12	7-18-13	9-12-13	9-24-18	9-24-13	8-28-13	
																		8,150 60				428 90										8,150 60	428 90	8,579 50	12-30-12	5-16-13	9-12-13	9-24-18	9-24-13		
[illegible]		[illegible]	[illegible]	6"	[illegible]	$2 24	6	15 61	$1 60																							10,623 33	6,575.38	17,198 71	[illegible]	6-16-13	12-18-13	[illegible]	1-21-14	2-2-14 10-11-13	Chester street, [illegible] and [illegible] avenues

TABLE 3 (Continued)—STATEMENT OF LENGTHS, WIDTHS AND AREAS OF

Contract Number	Contractor	Assistant Engineer in Charge	Name of Improved Street.	From.	To.	Measurements						Sheet Asphalt Paving.								Bituminous Concrete Paving								Wood Block Paving									[illegible]		
						Width.	Length of Streets.		Lengths of Returns.		Miles Av'g 30 Ft Wide	Name of Asphalt	Depth of Topping.	City.			Railway.			Name of Asphalt.	Depth of Surface	City.			Railway.			Name of Block.	City.				Railway.				[illegible]		
						Feet.	Feet.	Miles	Feet.	Miles.				Base.	Area	Price.	Base.	Area.	Price.			Base.	Area.	Price.	Base.	Area.	Price.		Base.	Filler.	Area.	Price.	Base	Filler.	Area.	Price.	Base.	[illegible]	Price.
44	F E Schneider Paving Co	Wilhar	McElderry st	E. B. L. Aisquith st	W B L Broadway	30.52	2,007.45	.38	250.00	.05	.54									Bermud. 50%, Cal. 50%.	2"	6"	8,411.06	$1.50	6"	22.25	$1.50										6"	[illegible]	[illegible]
			Oliver st	E. B. L. Guilford ave	W. B. L. Greenmount ave	30.35	906.45	.17	59.70	.01	.24									Bermudez	2"	4"	3,870.65	1.35															
			Patterson Park ave.	S B L Pratt st	72 ft south of S. W cor. Eager Place	41.81	3,871.85	.74	164.90	.03	1.03	California	2"	6"	11,394.46	$1.62	6"	1,261.18	$1.62																		6"	[illegible]	[illegible]
			Patterson Park ave.	72 ft. south of S. W. cor. Eager Place	S B L Preston st.	41.70	1,472.30	.28	201.20	.04	.38	California	2"	6"	3,741.44	1.62	6"	2,197.68	1.62																		6"	[illegible]	[illegible]
			Patterson Park ave.	S B L Fairmount ave	N B L Fairmount ave	41.95	66.05	.01	28.10	.01	.02																												
			Patterson Park ave.	S B L Monument st	N B L Monument st	41.75	70.25	.01	26.80	.00	.02																												
	Total contract						8,394.35	1.59	730.70	.14	2.23				15,135.90			3,458.86					*12,281.71			*22.25												[illegible]	
45	P Flanigan & Sons	Smith	Division st	N B L Lafayette avenue	N. B. L. Mosher st	38.95	388.80	.07	41.20	.01	.10									Standard Mexican	2"	4"	1,597.80	$1.27	4"	8.70	$1.27										6"	[illegible]	[illegible]
			Laurens st	E B L Pennsylvania ave	W. B. L. Druid Hill ave	39.34	801.95	.15	95.60	.02	.21	Standard Mexican	2"	6"	3,657.10	$1.70																							
			Laurens st	E B L Eutaw Place	W B L Linden ave	38.85	287.80	.06	28.50	.01	.08	Standard Mexican	2"	6"	1,232.20	1.70																							
			Mount st	N B L Riggs ave	S B L Laurens st	39.40	723.10	.14	24.70	.00	.18									Standard Mexican	2"	6"	2,924.10	1.40															
	Total contract						2,201.65	.42	190.00	.04	.57				4,889.30								*4,521.90			*8.70												[illegible]	
46	P F Reddington & Sons	Wilhar	Charles st	S B L Hill st	S B L Barre st	39.20	744.10	.14	98.30	.02	.19																												
			Commerce st	N B L Lombard st	S B L Baltimore	32.20 35.30	170.80 369.65	.10			.11																												
	Total contract						1,284.55	.24	98.30	.02	.30																												
47	Field Barker & Underwood	Smith	Fayette st	E B L Pine st	W B L Paca st	30.00	1,180.63	.22	97.15	.02	.29																												
			Greene st	N B L Baltimore st	S B L Lexington st	39.08	664.68	.13	40.30	.01	.16																												
	Total contract						1,845.31	.35	137.45	.03	.45																												
48	G. Long Contracting Co	Wilhar	Commerce st	N B L Pratt st	S. B. L. Lombard st	35.90	331.80	.06			.07																												
			Lombard st	E B L South st	W B L Gay st.	76.50 54.50 35.30	304.45 80.05 150.55	.10	61.70	.01	.21																												
	Total contract						866.85	.16	61.70	.01	.28																												
49	P Flanigan & Sons	Painter	Exeter st	N B L Baltimore st	S B L Fayette st	24.15	311.35	.06	8.20	.00	.05																												
			Frederick st	N B L Lexington st	S B L Gay st	21.00	298.15	.06			.04																												
			Saratoga st	E B L Calvert st	W B L Gay st	30.17 38.75 23.00	576.75 71.25 309.85	.17	38.30	.01	.17																												
	Total contract						1,517.35	.20	46.50	.01	.26																												
50	P Flanigan & Sons	Wilhar	Fort ave	W B L Lawrence st	E B L Lawrence st	40.05	86.50	.01	33.40	.01	.04																												
			Fort ave	E B L Lawrence st	Fort McHenry Gate	49.50	4,892.20	.93	323.40	.06	1.54	Standard Mexican	2"	6"	15,479.16	$1.70	6"	3,399.86	$1.70									South'n Long Leaf Pine.					[illegible]	B[illegible]	[illegible]	$[illegible]	6"	[illegible]	[illegible]
	Total contract						4,978.70	.94	356.80	.07	1.58				15,479.16			3,399.86																	[illegible]			[illegible]	
51	F E Schneider Paving Co	Wilhar	Biddle st	E B L Cathedral st	W B L Maryland ave	38.50	206.70	.04			.05	California	2"	6"	361.42	$1.85	6"	69.10	$1.85																		[illegible]	[illegible]	[illegible]
			Biddle st	E B L Maryland ave	W B L St Paul	38.90	718.60	.14	105.00	.02	.10									California	2"	4"	2,895.85	$1.38															
			Calvert st	N B L Saratoga st	N B L Pleasant st	35.50	452.10	.09	24.40	.01	.10	Cal 50%, Ber 50%	2"	6"	696.67	1.85	6"	150.59	1.85									South'n Long Leaf Pine.					[illegible]	B[illegible]	[illegible]	$[illegible]	[illegible]	[illegible]	[illegible]
			Maryland ave	N B L Chase st	S. B. L Preston st	38.62	708.20	.13	52.10	.01	.18	Cal 50%, Ber 50%	2"	6"	2,101.85	1.85	6"	115.55	1.85																		[illegible]	[illegible]	[illegible]
			Maryland ave	N. end bridge over P. R. R.	N. C. L. Falls road.	38.90	78.35	.01	20.00	.00	.02																												
			Maryland ave	N C L Falls road	S B L North ave	38.85	611.60	.12	53.45	.01	.15	Cal 50%, Ber 50%.	2"	6"	1,133.58	1.85	6"	213.87	1.85																		[illegible]	[illegible]	[illegible]
			Preston st	E B L Cathedral st	W B L Guilford ave	38.80	1,638.45	.31	168.60	.03	.40	California	2"	6"	3,133.84	1.85	6"	556.40	1.85																		[illegible]	[illegible]	[illegible]
	Total contract						4,414.00	.84	423.55	.08	1.09				7,427.36			1,105.51					*2,895.85												721.32			[illegible]	

MATERIALS USED ON PAVING DONE BY CONTRACT FOR THE PAVING COMMISSION.

Name of Block.	Vitrified Block Paving						Vitrified Block Repaving					Vitrified Block Gutter.			Name of Block	Granite Block Paving								Granite Block Repaving								Total Areas of Improved Paving			Record Dates.						Remarks and Intersections Omitted
	City			Railway			City		City and Railway Price	Railway.		City.				City.				Railway.				City.				Railway.													
	Base.	Area.	Price.	Base	Area	Price.	Base.	Area.		Base.	Area.	Base	Area.	Price		Base	Filler.	Area.	Price.	Base	Filler.	Area.	Price.	Base.	Filler.	Area	Price	Base.	Filler.	Area.	Price.	City Area.	Railway Area.	Combined Area.	Date of Contract.	Date of Starting.	Date of Complet'n.	Guaranty Expires	Assigned to City Eng Dept	Assigned to Appeal Tax Court.	
Metropolitan	6"	[illegible]	$2.15	6"	[illegible]	$2.20						6"	646.76	$2.15																		9,307.42	125.46	9,432.88	12-7-12	3-10-13	5-1-13	10-8-18	10-8-13	5-20-13	Central avenue.
Metropolitan	6"	15.14	2.15				4"	33.38	$0.95 1.20	6"	2.20		282.82	2.15																		4,201.99		4,201.99	12-7-12	3-3-13	4-2-13	10-8-18	10-8-13	5-20-13	
Metropolitan and Foster	6"	65.53	2.15	6"	[illegible]	2.20	5"	25.28	1.07½			6"	1,200.22	2.15																		12,756.49	5,311.15	18,067.64	12-7-12	3-21-13	9-12-13	10-8-18	10-8-13	8-28-13	Lombard street; Baltimore street; and Fairmount avenue, Fayette, Orleans, Jefferson, McElderry and Monument streets.
Metropolitan	6"	71.00	2.15				5"	51.09	1.07½			6"	62.50	2.15										6"	Cement	[3]3.18	$1.20					3,858.21	2,852.03	6,710.24	12-7-12	3-21-13	9-12-13	10-8-18	10-8-13	8-28-13	
Metropolitan	6"	201.42	2.20	6"	237.12	2.20																										201.42	237.12	438.54	12-7-12	3-21-13	9-12-13	10-8-18	10-8-13	8-28-13	
Metropolitan	6"	220.29	2.20	6"	214.90	2.20																										[illegible]	214.90	435.19	12-7-12	3-21-13	9-12-13	10-8-18	10-8-13	8-28-13	
		822.98			4,208.81			109.75			2.20		2,192.30													3.18						30,545.82	8,740.66	39,286.48	12-7-12	3-3-13	9-12-13	10-8-18	10-8-13		
[illegible]	6"	22.00	$2.15	6"	[illegible]	$2.15						6"	122.80	$2.15																		1,742.60	79.00	1,821.60	3-7-13	4-28-13	6-19-13	7-23-18	7-23-13	7-17-13	
[illegible]	[illegible]	18.80	2.15				[illegible]	.50	$1.18			6"	55.20	2.15																		3,731.60		3,731.60	3-7-13	4-7-13	6-5-13	7-23-18	7-23-13	7-17-13	
[illegible]	[illegible]	50.55	[illegible]				[illegible]	.60	1.18			6"	7.05	2.15																		1,290.40		1,290.40	3-7-13	4-9-13	6-5-13	7-23-18	7-23-13	7-17-13	
[illegible]	[illegible]	32.70	2.15									6"	241.00	2.15																		3,197.80		3,197.80	3-7-13	5-28-13	6-28-13	7-23-18	7-23-13	7-17-13	
		124.05			[illegible]			1.10					426.05																			9,062.40	79.00	10,041.40	3-7-13	5-28-13	6-28-13	7-23-18	7-23-13		
[illegible]	[illegible]	[illegible]	$2.24	6"	[illegible]	$2.27	[illegible]	3.53	$1.00	6"	4.90																					1,858.69	1,497.96	[illegible]	3-12-13	5-9-13	7-10-13	8-20-18	8-20-13	7-17-13	Lee street.
[illegible]	6"	1,468.56	2.24	6"	[illegible]	2.27																										1,468.56	538.63	2,007.19	3-12-13	4-28-13	6-7-13	8-20-18	8-20-13	7-17-13	Water street.
		[illegible]			2,031.69			3.53			4.90																					3,327.25	2,036.59	5,363.84	3-12-13	4-28-13	7-10-13	8-20-18	8-20-13		
[illegible]	[illegible]	[illegible]	[illegible]	6"	[illegible]	$2.55									Guilford					6"	Bit.	572.70	$3.75					6"	Bit.	[3]1,313.70	$2.10	2,599.30	2,492.70	5,092.00	3-13-13	3-28-13	7-15-13	10-8-18	10-8-13	7-17-13	Pearl street.
	[illegible]	[illegible]	[illegible]	6"	[illegible]	2.55																										1,502.00	1,308.00	2,810.00	3-13-13	4-4-13	7-25-13	10-8-18	10-8-13	8-28-13	Fayette street.
		[illegible]			[illegible]								......									572.70								1,313.70		4,101.30	3,800.70	7,902.00	3-13-13	3-28-13	7-25-13	10-8-18	10-8-13		
															Richmond & Mt. Airy	6"	Bit.	1,326.30	$3.43													1,326.30		1,326.30	3-5-13	[illegible]	8-14-13	12-17-18	12-17-13	7-17-13	
							6"	[illegible]	$1.45						Mt. Airy, Richmond and Woodstock	6"	Bit.	2,330.88	3.43	6"	Bit.	1,262.50	$3.53	6"	Bit.	[2]2.72	$1.33					2,360.43	1,262.50	3,622.93	3-5-13	6-13-13	11-13-13	12-17-18	12-17-13	10-11-13	
								[illegible]										3,657.18				1,262.50				2.72						3,686.73	1,262.50	4,949.23	3-5-13	[illegible]	11-13-13	12-17-18	12-17-13		
															Rockport	6"	Cement	840.32	$3.45													840.32		840.32	3-7-13	3-10-13	6-7-13	7-30-18	7-30-13	7-17-13	
															Rockport	6"	Cement	669.03	3.45													699.03		669.03	3-7-13	4-1-13	5-5-13	7-30-18	7-30-13	7-17-13	
															Rockport	6"	Cement	3,006.08	3.45													3,006.08		3,006.08	3-7-13	4-7-13	6-3-13	7-30-18	[illegible]	7-17-13	Davis and [illegible] streets.
																		4,515.43														4,515.43		4,515.43	3-7-13	4-1-13	6-7-13	[illegible]	[illegible]		
															Rockport	6"	Bit.	216.11	$3.65	6"	Bit.	415.47	$3.55						Bit.			216.11	415.47	[illegible]	3-14-13	5-2-13	[illegible]	[illegible]	12-17-13	10-11-13	
[illegible]	6"	[illegible]	[illegible]	6"	5,267.23	$2.20	[illegible]	15.73	$1.18¼			6"	1,611.87	$2.15										6"	Bit. Sand	[2]27.06	[illegible]					[illegible]	[illegible]	[illegible]	[illegible]	5-2-13	[illegible]	[illegible]	12-17-13	[illegible]	Bridge [illegible]
		192.07			[illegible]			15.73					1,611.87					216.11				415.47				27.06						[illegible]	10,169.11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12-17-13		
				6"	[illegible]	$2.25						6"	70.70	$2.25																		[illegible]	411.11	[illegible]	[illegible]	4-21-13	[illegible]	[illegible]	[illegible]	7-17-13	
	[illegible]											4"	213.20	2.20																		[illegible]		[illegible]	[illegible]	4-23-13	[illegible]	[illegible]	[illegible]	[illegible]	Charles street.
				6"		2.25						6"	[illegible]	2.25																		[illegible]	[illegible]	[illegible]	[illegible]	6-24-13	8-1-13	10-8-18	10-8-13	[illegible]	
[illegible]	6"	60.77		6"	[illegible]	2.25	6"	16.53	$1.43¼			6"	227.21	2.25																		[illegible]	726.35	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10-8-13	[illegible]	
												6"	11.83	2.25	Mt. Airy	6"	Bit.	220.12	$3.50	6"	Bit.	175.33	$3.50									[illegible]	175.33	[illegible]	[illegible]	[illegible]	[illegible]	10-8-18	10-8-13	8-28-13	
[illegible]	6"	[illegible]	2.25	6"	1.01	2.25						6"	202.30	2.25																		[illegible]	1,296.26	2,659.89	[illegible]	[illegible]	[illegible]	10-8-18	10-8-13	8-28-13	
	6"	148.99	2.25	6"	[illegible]	2.25						6"	546.98	2.25																		[illegible]	3,219.12	[illegible]	[illegible]	[illegible]	9-12-13	[illegible]	10-8-13	[illegible]	Charles, St. Paul and Calvert streets.
		339.68			[illegible]			16.53					1,445.81					220.12				175.33										[illegible]	6,755.54	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		

TABLE 3 (Continued)—STATEMENT OF LENGTHS, WIDTHS AND AREAS OF

Contract Number	Contractor.	Assistant Engineer in Charge.	Name of Improved Street.	From.	To.	Measurements.						Sheet Asphalt Paving.								Bituminous Concrete Paving.								Wood Block Paving									Wood Block Liner		
						Width.	Length of Streets.		Lengths of Returns.		Miles Av'g 30 Ft Wide	Name of Asphalt.	Depth of Topping.	City.			Railway.			Name of Asphalt.	Depth of Surface	City.			Railway.			Name of Block.	City.				Railway.				Railway.		
						Feet.	Feet.	Miles.	Feet.	Miles				Base.	Area.	Price.	Base.	Area.	Price.			Base.	Area.	Price.	Base.	Area.	Price.		Base.	Filler.	Area.	Price.	Base	Filler	Area.	Price.	Base	Area.	Price.
52	Thomas Mullan	rozier	Guilford ave.	N. end of P R R. Bridge	N B L Lanvale st.	36.12	788.42	.15	23.80	.00	.18																												
			McMechen st.	E B L Pennsylvania ave.	W. B L McCulloh st																																		
			Park ave	N B L Laurens st.	S B L. North ave.	39.55	176.55	.03			.04																												
			Preston st	E end Jones Falls Bridge	W. B. L. Valley st.	39.17	1,155.45	.22	98.50	.02	.29																												
	Total contract						2,120.42	.40	122.30	.02	.51																												
53	P. F Reddington	mith and Wilhar	Eutaw st	N. C. L. Lee st	S B L Camden st.																																		
			Hill st	E B L. Sharp st.	W B L Charles st	49.00	656.60	.13	31.00	.01	.20																												
			Sharp st	N side of B. & O R R.	N B L Ostend st.	38.55	329.60	.06	27.50	.00	.09																												
			Sharp st	N B L Ostend st	S B L Hamburg st	38.73	1,128.45	.21	52.35	.01	.28																												
			Sharp st	S B L Hamburg st	N B L Hamburg st	38.85	62.55	.01	27.65	.00	.02																												
			Sharp st	N. B. L. Hamburg st.	S C L Hill st	38.53	938.85	.18	41.30	.01	.23																												
			Sharp st., e. drive	N C L Montgomery st.	S C L Hill st	37.95	173.70	.03			.04																												
			Montgomery st.	E. C. L. Sharp st.	E B L east drive Sharp st	38.50	98.50	.02			.02																												
			Hill st	W B L Sharp st	E B L east drive Sharp st	49.60	85.90	.02			.03																												
	Total contract						3,474.15	.60	179.80	.03	.91																												
54	Eastern Paving Co	rozier	Linden ave	N B L Biddle st	N. B. L. Dolphin st.	38.97	1,189.10	.23	94.35	.02	.29	Aztec	2"	6"	2,152.52	$1.70	6"	795.26	$1.70																		[illegible]	[illegible]	[illegible]
			Mosher st	E B L Park ave	W B L John st.	38.65	318.65	.06	50.75	.01	.08									Aztec	2'	4"	1,291.74	$1.25															
			Mosher st	W B L John st	E B L John st	38.78	67.05	.01	27.05	.00	.02	Aztec	2"	6"	245.81	1.70	6"	21.94	1.70																		[illegible]	[illegible]	[illegible]
			Mosher st	E B L John st	W B L Mt Royal ave	39.12	319.90	.06	40.90	.01	.08									Aztec	2"	4"	1,291.00	1.25															
	Total contract						1,894.70	.36	213.05	.04	.47				2,398.33			817.20					2,582.74															[illegible]	
55	P F Reddington	rozier	Andre st.	N. B. L. Fort ave.	S. B L. Marriott st																																		
			Federal st	E B L Calvert st	W B L Greenmount ave	39.90	1,140.00	.22	107.40	.02	.30																												
			Franklin st.	E. B. L. Charles st.	W. B L. St. Paul st.	42.65	287.85	.05	13.60	.00	.08																												
			Harrison st.	N. B. L. Baltimore st.	S B L Gay st	40.98 30.45 28.35	442.60 140.40 418.35	.19	9.90	.00	.22																												
			Saratoga st.	E B. L. Charles st.	W B L Calvert st.	28.94	664.60	.13	31.85	.01	.12																												
	Total contract						3,093.80	.59	162.75	.03	.72																												
56	Eastern Paving Co.	ilhar	West st.	E B L Light st	W B L Riverside ave	30.75	906.15	.17	87.60	.02	.18	Aztec	1½"	6"	2,861.77	$1.65																							
57	M J [illegible]	unter	Central ave., w. side.	S B L Fawn st	S. B. L. Pratt st.	74.12	(½) 556.78	.05	48.90	.01	.14																												
			Central ave., w. side.	S B L Pratt st	N. B. L. Pratt st.	74.20	(½) 52.82	.01	12.25	.00	.02																												
			Central ave., w. side.	N B L Pratt st	N B L Granby st.	74.10	(½) 201.70	.03	27.83	.00	.07																												
			Central ave., e. side.	S B L Granby st	S. B. L. Baltimore st.	73.55	(½) 664.38	.06	12.40	.00	.15																												
			Central ave.	S. B. L. Baltimore st.	N. B. L. Baltimore st.	73.70	84.65	.02	26.17	.01	.04																												
			Central ave., e. side.	N. B. L. Baltimore st.	N. B. L. Fayette st.	73.75	(½) 387.08	.03	52.55	.01	.09																												
	Total contract						1,061.03	.20	178.10	.03	.51																												

MATERIALS USED ON PAVING DONE BY CONTRACT FOR THE PAVING COMMISSION.

Vitrified Block Paving							Vitrified Block Repaving					Vitrified Block Gutter			Granite Block Paving									Granite Block Repaving								Total Areas of Improved Paving.			Record Dates.						Remarks and Intersections Omitted
	City.			Rails			City.			Railway.			City.			City				Railway.				City.				Railway.													
Name of Block	Base	Area	Price	Base.	Area	Price	Base	Area.	City and Railway Price	Base.	Area	Base	Area.	Price	Name of Block	Base.	Filler.	Area.	Price.	Base.	Filler.	Area.	Price.	Base.	Filler.	Area	Price.	Base.	Filler.	Area.	Price.	City Area.	Railway Area	Combined Area	Date of Contract	Date of Starting.	Date of Complet'n	Guaranty Expires	Assigned to City Eng Dept.	Assigned to Appeal Tax Court.	
[illegible]	6"	1,584 49	$2 14	6"	1,591	$2 30																										1,584 49	1,591.19	3,175 68	4-25-13	7-17-13	11-6-13	....	....	10-11-13	
																																			4-25-13						Construction not started
[illegible]	[illegible]	775 84	[illegible]		......	......																										775 84		775 84	4-25-13	8-8-13	9-6-13			9-30-13	
Foster, Mayer and Tuna Valley	[illegible]	2,895.72	2 14	6"	2,196 25	2 30																										2,895.72	2,196 25	5,091.97	4-25-13	6-30-13	11-21-13			10-11-13 12-1-13	Greenmount avenue.
		5,256 05			3,787.44																											5,256 05	3,787.44	9,043.49	4-25-13	6-30-13					
																																			6-1-13						Construction not started
															Harris, Woodstock and Richmond	6"	Cement	3,618.66	$3.42													3,618 66		3,618.66	6-1-13	8-20-13	9-20-13			9-30-13	Hanover street.
															Harris, Richmond and Woodstock	6" 6" 6"	Bit. Cement Bit.	1,439 47 2,495 65 163 44	3 63 3.42 3.63	6" 6" 6"	Bit. Cement Bit.	107.86 2,205 55 216 89	$3 63 3 42 3 63	6"	Sand	119 79	$1 05	6"	Sand	14 53	$1 05	1,439 47 2,615.44 163.44	107 86 2,280 08 216.89	1,547 33 4,895 52 380.33	6-1-13 6-1-13 6-1-13	8-28-13 8-28-13 8-28-13	12-31-13 12-31-13 12-31-13			10-11-13 10-11-13 10-11-13	
															Mount Airy, Woodstock, Richmond and Spartanburg	6"	Cement	2,117.60	3.42	6"	Cement	1,886.83	3.42									2,117.60	1,886.83	4,004 43	6-1-13	8-28-13	12-31-13			2-2-14	
															Harris	6"	Cement	698 73	3.42													698.73		698 73	6-1-13	8-28-13	12-31-13			2-2-14	
															Harris and Woodstock	6"	Cement	408.53	3 42			......										408.53		408.53	6-1-13	8-28-13	12-31-13			2-2-14	
															Woodstock and Harris	6"	Cement	346.04	3 42	6"	Cement	108.10	3 42									346.04	108 10	454.14	6-1-13	8-28-13	12-31-13			2-2-14	
																		11,288 12				4,585 23				119 79				14.53		11,407 91	4,599.76	16,007.67	6-1-13	8-20-13					
Metropolitan, Foster, Tuna Valley and [illegible]	6"	[illegible]	[illegible]	6"	[illegible]	$2 22			[illegible]	6"	3 97	6"	[illegible]	$2 22																		2,610 06	2,474.74	5,084 80	4-22-13	5-12-13	10-21-13	12-3-18	12-3-13	10-11-13	Preston and Hoffman streets.
	6"	[illegible]	[illegible]									6"	101.68	2 22																		1,424 99		1,424.99	4-22-13	5-7-13	7-15-13	12-3-18	12-3-13	8-28-13	
				6"	[illegible]	[illegible]						6"	[illegible]	2 22																		[illegible]	132.04	[illegible]	4-22-13	5-7-13	7-15-13	12-3-18	12-3-13	8-28-13	
	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]	1.00			6"	113 63	2 22																		1,454 24		1,454.24	4-22-13	5-7-13	7-15-13	12-3-18	12-3-13	8-28-13	
		[illegible]			[illegible]			14.38			3.97		636 70																			5,752 84	2,606 78	8,359.62	4-22-13	5-7-13	10-21-13	12-3-18	12-3-13		
	6"	[illegible]	[illegible]																													5,290 00		5,290.00	6-1-13 6-1-13	11-25-13					Construction not started.
Metropol'n & Baltimore	6"	1,380 71	2 21																													1,380 71		1,380.71	6-1-13	11-8-13	12-3-13			12-10-13	Under construction
Tuna Valley	6"	[illegible]	[illegible]																													3,836.40		3,836.40	6-1-13	7-23-13	9-20-13			9-30-13	Fayette and Lexington streets
[illegible]	6"	2,202 76	2.21																													2,202 76		2,202 76	6-1-13	10-15-13	11-10-13			12-10-13	St. Paul street
		12,709 87																														12,709 87		12,709 87	6-1-13	7-23-13					
		[illegible]	$2 22									6"	[illegible]	$2 22																		3,203 88		3,203.88	6-16-13	7-7-13	9-12-13	10-8-18	10-8-13	9-30-13	
															Mt Airy and Richmond	6" 6"	Bit. Cement	105.09 1,622.40	$3 45 3 20	6"	Bit.	656 06	$3 45									1,727.49	656.06	2,383 55	6-11-13	6-11-13	10-18-13	11-19-18	11-19-13	9-30-13	
													...			6"	Bit.	124.38	3 45	6"	Bit.	135.13	3.45									124.38	135 13	259.51	6-11-13	6-10-13	10-18-13	11-19-18	11-19-13	9-30-13	
	6"	[illegible]	[illegible]																	6"	Bit.	316 76	3.45									907 72	316 76	1,224.48	6-11-13	6-10-13	10-18-13	11-19-18	11-19-13	7-17-13	
	6"	2,061 81	[illegible]																	6"	Bit.	642 44	3 45									2,061 81	642.44	2,704 25	6-11-13	6-10-13	10-18-13	11-19-18	11-19-13	7-17-13	
																6"	Bit	464 18	3 45	6"	Bit.	314 66	3 45									464.18	314.66	778 84	6-11-13	6-10-13	10-18-13	11-19-18	11-19-13	7-17-13	
	6"	[illegible]	[illegible]																	6"	Bit.	417 24	3 45									1,227 35	417.24	1,644 59	6-11-13	6-10-13	10-18-13	11-19-18	11-19-13	7-17-13	
		4,196 88																2,316.05				2,482 29										6,512.93	2,482.29	8,995 22	6-11-13	6-10-13	10-18-13	11-17-18	11-17-13		

TABLE 3 (Continued)—STATEMENT OF LENGTHS, WIDTHS AND AREAS OF

Contract Number	Contractor	Assistant Engineer in Charge	Name of Improved Street	From	To	Measurements. Width. Feet.	Length of Streets. Feet.	Length of Streets. Miles.	Lengths of Returns. Feet.	Lengths of Returns. Miles.	Miles Av'g 30 Ft. Wide	Sheet Asphalt Paving. Name of Asphalt.	Depth of Topping.	City. Base.	City. Area.	City. Price.	Railway. Base.	Railway. Area	Railway. Price.	Bituminous Concrete Paving. Name of Asphalt	Depth of Surface	City. Base.	City. Area.	City. Price.	Railway. Base.	Railway. Area.	Railway. Price.	Wood Block Paving. Name of Block.	City. Base.	City. Filler.	City. Area.	City. Price.	Railway. Base	Railway. Filler.	Railway. Area.	Railway. Price.	Wood Block Liners. Railway. Base	Railway. Area.	Railway. Price.
58	Standard Contracting Co	Williar	Custom House ave	N. B. L. Lombard st	S. B. L. Water st	11.90	201.70	.04			.02																												
			Fairmount ave	E. B. L. Central ave	W. B. L. Broadway	20.26 39.53	948.55 460.85	.25	102.60	.02	.25																												
			Bond st	S. W. B. L. Fairmount ave	N. E. B. L. Fairmount ave	41.95	93.65	.02			.02																												
			Forrest st	N. B. L. W. Fayette st	S. B. L. Lexington st	35.03	558.00	.11	24.60	.00	.09																												
			Granby st	E. B. L. Exeter st	W. B. L. Central ave	30.18 29.25	326.53 379.67	.13	10.00	.00	.13																												
			Hargrove alley	N. B. L. Saratoga st	S. B. L. Pleasant st	11.27 19.10	197.10 203.20	.08			.04																												
			Low st	E. B. L. Front st	W. B. L. East st	18.74	912.60	.17	36.30	.01	.11																												
			Watson st	E. B. L. High st	W. B. L. Central ave	22.60	1,182.50	.23	44.70	.01	.18																												
	Total contract						5,464.35	1.03	218.20	.04	.84																												
59	Standard Contracting Co	Painter	McMechen st	N. E. B. L. Park ave	W. side Malster ave	38.70	868.20	.16	108.90	.02	.21																												
			Sherman Place	N. B. L. Lanvale st	S. B. L. North ave	11.88 15.46 19.40	489.90 178.70 27.00	.13	22.40	.00	.06																												
	Total contract						1,563.80	.29	131.30	.02	.27																												
60	John F. Quinn	Smith	President st	N. B. L. Fawn st	S. E. B. L. Pratt st	36.00	459.95	.09	24.95	.00	.11																												
			Ridgely st	16 N. of Nr. Nt. of B. & O. R. R.	S. B. L. Fremont ave	38.95	2,063.05	.39	149.90	.03	.52																												
	Total contract						2,523.00	.48	174.85	.03	.63																												
61	Southern Paving Construction Co	Williar	Eastern ave	E. B. L. East Falls ave	W. B. L. Caroline st																																		
			Eastern ave	W. B. L. Caroline st	E. B. L. Bond st																																		
			Eastern ave	E. B. L. Bond st	W. B. L. Broadway																																		
			[illegible]	[illegible]	N. B. L. Stiles st																																		
			Driveway	E. B. L. East Falls ave	Sewerage Pumping Station																																		
			Driveway	W. B. L. President st	Sewerage Pumping Station																																		
	Total contract																																						
62	Baltimore Asphalt Paving and Tar Co	Smith	Biddle st	E. B. L. Calvert st	W. side Guilford ave	39.55	304.00	.06	30.60	.01	.08	California	1½"	6"	1,233.30	$1.62																							
			Bloom st	E. B. L. Pennsylvania ave	W. B. L. Eutaw Place	39.46	1,565.00	.30	108.90	.04	.41	California	1"	6"	6,513.00	1.55																							
			Gold st	E. B. L. Druid Hill ave	W. B. L. Madison ave	39.00	491.45	.09	13.80	.00	.12	California	1½"	6"	1,972.90	1.62																							
			Etting st	N. B. L. Dolphin st	S. B. L. Lanvale st	38.75	341.55	.06	61.50	.01	.09																												
			Etting st	N. B. L. Lanvale st	S. B. L. North ave	38.33	1,603.78	.30	71.45	.01	.38	California	1½"	6"	4,050.50	1.62	6"	1,983.10	$1.62																		6"	[illegible]	[illegible]
			Lafayette ave	E. B. L. Maryland ave	W. B. L. Greenmount ave	39.30	2,000.70	.40	255.55	.05	.55	California	1½"	6"	8,422.50	1.62	6"	107.10	1.62																		6"	[illegible]	[illegible]
			Presstman st	E. B. L. Druid Hill ave	W. B. L. Linden ave	39.50	1,070.85	.20	144.90	.03	.28	California	1½"	6"	4,369.30	1.62																							
			Robert st	E. B. L. Eutaw Place	W. B. L. Linden ave	39.15	279.95	.05	30.70	.01	.07	California	1"	6"	1,130.20	1.55																							
			Wilson st	E. B. L. Madison ave	W. B. L. Eutaw Place	39.30	294.55	.06	26.50	.00	.08	California	1"	6"	1,185.30	1.55																							
	Total contract						8,050.83	1.52	842.90	.16	2.06				28,877.00			2,090.20																				[illegible]	

MATERIALS USED ON PAVING DONE BY CONTRACT FOR THE PAVING COMMISSION.

Name of Block	Vitrified Block Paving						Vitrified Block Repaving					Vitrified Block Gutter.			Name of Block.	Granite Block Paving								Granite Block Repaving								Total Areas of Improved Paving			Record Dates.						Remarks and Intersections Omitted
	City.			Railw			City.			Railway.		City				City.				Railway.				City				Railway.													
	Base.	Area	Price.	Base	Area	Price	Base.	Area	City and Railway Price	Base.	Area	Base.	Area	Price		Base.	Filler.	Area	Price.	Base.	Filler.	Area.	Price.	Base.	Filler.	Area	Price.	Base.	Filler.	Area.	Price	City Area.	Railway Area.	Combined Area.	Date of Contract.	Date of Starting	Date of Complet'n.	Guaranty Expires.	Assigned to City Eng Dept	Assigned to Appeal Tax Court.	
[illegible]	[illegible]	258.08	$2.22					15.13	$1.40																							273.21		273.21	7-3-13	11-21-13	12-3-13	2-4-19	2-4-14	12-10-13	Water street.
[illegible] & [illegible]	6"	4,364.50	2.22																													4,364.50		4,364.50	7-3-13	10-31-13	12-31-13	2-4-19	2-4-14	2-2-14	Caroline and Bond streets
[illegible]	6"	426.46	2.22																													426.46		426.46	7-3-13	10-31-13	12-31-13	2-4-19	2-4-14	2-2-14	
[illegible]	6"	1,615.26	2.22																													1,615.26		1,615.26	7-3-13	9-6-13	12-1-13	2-4-19	2-4-14	12-10-13	
[illegible] & [illegible]	6"	2,274.69	2.22																													2,274.69		2,274.69	7-3-13	10-11-13	12-17-13	2-4-19	2-4-14	2-2-14	
[illegible]	6"	683.90	2.22																													683.90		683.90	7-3-13	8-6-13	9-2-13	2-4-19	2-4-14	9-30-13	
[illegible]	6"	1,981.04	2.22																													1,981.04		1,981.04	7-3-13	8-15-13	11-13-13	2-4-19	2-4-14	10-11-13 12-10-13	High and Exeter streets
[illegible]	6"	3,089.00	2.22																													3,089.00		3,089.00	7-3-13	9-12-13	12-22-13	2-4-19	2-4-14	12-10-13	Exeter street.
		14,692.93						15.13																								14,708.06		14,708.06	7-3-13	8-6-13	12-31-13	2-4-19	2-4-14		
[illegible]	[illegible]	1,949.62	$2.20	6"	1,830.29	$2.40																										1,949.62	1,830.29	3,779.91	7-3-13	7-8-13	11-1-13	12-17-18	12-17-13	10-11-13 12-10-13	Mount Royal avenue
[illegible]	[illegible]	1,042.73	2.20																													1,042.73		1,042.73	7-3-13	7-11-13	8-29-13	12-17-18	12-17-13	9-30-13	Lafayette avenue
		2,992.35			1,830.29																											2,992.35	1,830.29	4,822.64	7-3-13	7-8-13	11-1-13	12-17-18	12-17-13		
															Richmond & Mt Airy	6"	Bit.	1,535.50	$3.67	6"	Bit.	367.20	$3.67									1,535.50	367.20	1,902.70	7-9-13	8-29-13	11-1-13			12-10-13	
															Richmond, Woodstock and Mt. Airy	6"	Bit.	4,992.50	3.67	6"	Bit.	4,161.20	3.67									4,992.50	4,161.20	9,153.70	7-9-13	9-25-13	12-31-13			2-2-14	
																		6,528.00				4,528.40										6,528.00	4,528.40	11,056.40	7-9-13	8-29-13	12-31-13				
																																									Construction not started
																																									Construction not started
																																									Construction not started
																																									Construction not started
																																									Construction not started
																																									Construction not started
																																			9-20-13						
[illegible]	[illegible]	43.10	$2.20									6"	101.30	$2.15																		1,377.70		1,377.70		7-3-13	9-27-13			9-30-13	
[illegible]	[illegible]	[illegible]	2.20				6"	7.00	$1.51½			6"	519.00	2.15																		7,268.30		7,268.30		7-18-13	9-20-13			9-30-13	Druid Hill avenue, McCulloh street and Madison avenue
[illegible]	[illegible]	[illegible]	2.20				6"	20.50	1.51½			6"	153.10	2.15																		2,165.10		2,165.10		7-29-13	9-2-13			9-30-13	McCulloh street.
[illegible]		[illegible]	2.20																													1,534.80		1,534.80		9-10-13	12-10-13			12-10-13	
[illegible]	[illegible]	[illegible]	2.20									6"	54.00	2.15																		4,166.40	2,547.10	6,713.50		9-10-13	12-10-13			11-11-13 12-10-13	Lafayette avenue; Mosher and McMechen streets.
[illegible]	[illegible]	[illegible]	2.20	6"	[illegible]	$2.25						6"	140.00	2.15																		8,954.70	645.10	9,599.80		8-8-13	10-28-13			9-30-13	Charles, St. Paul, Calvert streets and Guilford avenue
[illegible]		224.00										6"	324.50	2.15																		4,917.80		4,917.80		8-1-13	9-15-13			9-30-13	McCulloh street, Madison avenue and Eutaw Place
[illegible]		[illegible]	2.20									6"	93.10	2.15																		1,293.30		1,293.30		8-22-13	9-20-13			9-30-13	
Mack.	6"	[illegible]	2.20									6"	92.20	2.15																		1,342.00		1,342.00		8-26-13	9-20-13			9-30-13	
		[illegible]			[illegible]			[illegible]					1,477.20																			33,021.00	3,192.20	36,213.20	7-14-13	7-18-13	12-10-13	12-31-18	12-31-13		

TABLE 3 (Continued)—STATEMENT OF LENGTHS, WIDTHS AND AREAS OF

Contract Number	Contractor	Assistant Engineer in Charge	Name of Improved Street	From	To	Measurements. Width. Feet	Length of Streets. Feet.	Length of Streets. Miles.	Lengths of Returns. Feet.	Lengths of Returns. Miles	Miles Av'g 30 Ft Wide
63	Filbert Paving and Contracting Co.	Crozier	[illegible] ave	N. B. L. Baltimore st	S. B. L. Orleans st	41.77	1,115.85	.21	128.20	.02	.31
			[illegible]	N. B. L. [illegible] st	S. B. L. Franklin st	27.00	870.63	.17	38.15	.01	.15
			[illegible]	S. B. L. Pleasant st	N. B. L. Pleasant st	27.55	49.12	.01	17.90	.00	.01
			[illegible]	S. B. L. Mulberry st	N. B. L. Mulberry st	26.55	49.45	.01	17.55	.00	.01
			[illegible] ave	E. B. L. Patterson Park ave	W. B. L. Ellwood ave	41.80	3,020.90	.57	85.55	.02	.78
	Total contract						5,105.95	.97	287.35	.05	1.26
64	[illegible] Asphalt Block and Tile Co.	Williar	Hamburg st	E. B. L. Light st	Federal Hill Park	19.45 23.53	359.00 1,026.30	.26	72.75	.02	.21
			William st	S. B. L. Hamburg st	N. B. L. Hamburg st	28.30 39.45	7.00 64.00	.01			.01
			William st	N. B. L. [illegible] st	S. B. L. West st	30.22	713.20	.14	19.40	.00	.14
	Total contract						2,169.50	.41	92.15	.02	.36
65	Southern Paving Construction Co.	Painter	Fayette st	E. B. L. Gay st	W. B. L. Caroline st	23.85 31.45 33.30 28.80 30.05 29.33	527.72 154.73 54.60 118.60 508.80 1,695.45	.58	172.60	.03	.58
			[illegible]	S. B. L. Eastern ave	S. B. L. Pratt st						
			Pratt st	E. B. L. Central ave	W. B. L. Broadway						
	Total contract						3,057.90	.58	172.60	.03	.58
66	P. F. [illegible]	Crozier	[illegible] st	N. B. L. Mosher st	S. B. L. Wilson st						
			[illegible]	N. B. L. Preston st	S. B. L. Eager st						
			[illegible]	N. B. L. Baltimore st	N. B. L. Fayette st						
	Total contract										
67	Southern Paving Construction Co.	South and Wel[illegible]	Ashland ave	E. B. L. [illegible] st	W. B. L. Broadway	30.53	1,711.38	.32	136.00	.03	.44
			[illegible] st	N. B. L. Monument st	S. B. L. Chase st						
			[illegible] st	E. B. L. Ensor st	W. B. L. Broadway						
			[illegible] ave	N. B. L. [illegible] st	S. B. L. Hoffman st	30.17	984.75	.19	66.00	.01	.25
			[illegible] st	N. B. L. Madison st	S. B. L. Eager st	17.80 38.70	400.35 343.35	.16	25.45	.00	.15
			Maryland ave	N. B. L. Preston st	S. B. L. Mt. Royal ave						
			Maryland ave	N. B. L. Mt. Royal ave	S. B. L. Oliver st						
			[illegible]	S. B. L. Oliver st	S. end of P. R. R. [illegible]						
			[illegible] st	E. B. L. [illegible]	W. B. L. Fayette st						
	Total contract						3,529.83	.67	228.35	.04	.84
68	John F. Quinn	Painter	[illegible]	N. B. L. Lancaster st	N. B. L. Fawn st	35.84	90.80	.02			.02
			[illegible]	W. B. L. President st	E. B. L. President st						
	Total contract						90.80	.02			.02
69	C. Long Contracting Co.	Williar	Water st	E. B. L. South st	W. B. L. Gay st	38.36	527.45	.10	26.75	.01	.10

Contract Number	Name of Improved Street	Sheet Asphalt Paving. Name of Asphalt	Depth of Topping.	City. Base.	City. Area.	City. Price.	Railway. Base.	Railway. Area.	Railway. Price.	Bituminous Concrete Paving. Name of Asphalt	Depth of Surface	City. Base.	City. Area	City. Price.	Railway. Base.	Railway. Area	Railway. Price.	Wood Block Paving. Name of Block.	City. Base.	City. Filler.	City. Area.	City. Price.	Railway. Base	Railway. Filler.	Railway. Area.	Railway. Price.	Wood Block Liners. Railway. Base	Railway. Area.	Railway. Price.
63	[illegible] ave	Aztec	1½"	6"	4,802.42	$1.69																							
	[illegible]	Aztec	1½"	6"	2,294.95	1.69																							
	[illegible]																												
	[illegible]																												
	[illegible] ave	Aztec	1½"	6"	7,378.87	1.69	6"	1,007.08	$1.69																			335.09	$3.80
	Total contract				14,476.24			1,007.08																				335.09	
64	Hamburg st	Montezuma	1½"	6"	3,263.56	$1.75																							
	William st	Montezuma	1½"	6"	227.06	1.75																							
	William st	Montezuma	1½"	6"	2,201.42	1.75																							
	Total contract				5,692.04																								
65	Fayette st	Standard Mexican	1½"	6"	9,911.84	$1.59																							
	[illegible]																												
	Pratt st																												
	Total contract				9,911.84																								
66	[illegible] st																												
	[illegible]																												
	[illegible]																												
	Total contract																												
67	Ashland ave	Standard Mexican	1½"	6"	6,452.04	$1.62	6"	252.32	$1.62																		6"	84.11	$3.25
	[illegible] st																												
	[illegible] st																												
	[illegible] ave									Standard Mexican	2"	6"	4,018.13	$1.53															
	[illegible] st	Standard Mexican	1½"	6"	2,298.27	1.62																							
	Maryland ave																												
	Maryland ave																												
	[illegible]																												
	[illegible] st																												
	Total contract				8,750.31			252.32					4,018.13															84.11	
68	[illegible]																												
	[illegible]																												
	Total contract																												
69	Water st																	South'n Long Leaf Pine	6"	Sand	[illegible]	[illegible]	6"	Sand	47.65	$2.90			

MATERIALS USED ON PAVING DONE BY CONTRACT FOR THE PAVING COMMISSION.

Vitrified Block Paving							Vitrified Block Repaving					Vitrified Block Gutter.			Granite Block Paving.									Granite Block Repaving.								Total Areas of Improved Paving.			Record Dates.						Remarks and Intersections Omitted
Name of Block	City			Railway.			City.		City and Railway, Price	Railway.		City.			Name of Block	City.				Railway.				City.				Railway.				City Area	Railway Area.	Combined Area.	Date of Contract.	Date of Starting.	Date of Complet'n.	Guaranty Expires.	Assigned to City Eng Dept.	Assigned to Appeal Tax Court.	
	Base	Area	Price	Base.	Area	Price.	Base.	Area.		Base	Area.	Base.	Area.	Price.		Base.	Filler.	Area.	Price.	Base	Filler.	Area.	Price.	Base.	Filler.	Area.	Price.	Base.	Filler.	Area.	Price.										
[illegible]	6"	163 37	$2 35				6	16.00	$1 25			6"	371 95	$2 35																		5,353 74		5,353.74		8- 4-13	9-26-13			9-30-13	Fairmount avenue and Fayette street
[illegible]	6"	5.33	2 35				6"	42.86	1 25			6"	289 94	2.35																		2,633 08		2,633 08		7-21-13	8-26-13			8-28-13	Pleasant and Mulberry streets.
[illegible]	6"	208 35	2 40																													208.35		208.35		7 21-13	8-26-13			8-28-13	
[illegible]	6"	205 95	2 40																													205 95		205 95		7-21-13	8-26-13			8-28-13	
[illegible]	6"	52 98	2 35									6"	260 30	2 35	Richmond & Lithonia					6"	Cement	4,718 07	$3.80									7,692 15	6,060.84	13,752 99		8-29-13	12-19-13			2- 2-14	Lakewood avenue and Patuxent street.
		635 98						58 86					922 19									4,718.07										16,093 27	6,060.84	22,154 11	7-18-13	7-21-13	9-26-13	2- 4-19	2- 4-14		
[illegible]	6"	71 98	$2.25									6"	397.52	$2 25																		3,733 06		3,733.06		10-27-13	12- 9-13			12-10-13	William street.
												6"	16 32	2.25																		243 38		243.38		10-27-13	12- 9-13			12-10-13	
												6"	240.01	2 25																		2,441 43		2,441.43		10-18-13	12-27-13			2- 2-14	
		71 98											653 85																			6,417 87		6,417 87	7-22-13	10-18-13	12-27-13	1-14-19	1-14-14		
												6"	317 38	$2 15																		10,229.22		10,229.22		9-10-13	12-18-13			12-10-13	Fallsway; High, Asquith streets and Central avenue
																																				10-10-13					Under construction, no paving laid.
																																				11- 4-13					Under construction, no paving laid.
													317 38																			10,229.22		10,229.22	8-20-13	9-10-13					
																																									Construction not started
																																									Construction not started.
																																									Construction not started.
																																			7-29-13						
[illegible]	6"	104 21	$2 19	6"	40.[illegible]	$2.23						6"	394 25	$2 19																		6,950 50	746.10	7,696 60		10- 1-13	12-31-13			2- 2-14 12-10-13	Central avenue; Eden, Gay, Caroline and Bond streets.
																																				10-16-13					Under construction, no paving laid.
																																				10-17-13					Under construction, no paving laid
[illegible]	6"	72 42	2 19									6"	327.37	2 19																		4,417 92		4,417 92		9-18-13	12-31-13			12-10-13	Biddle and Preston streets.
[illegible]	6"	14 46	2 19									6"	305 65	2 19																		2,618.38		2,618 38		9-25-13	12 31-13			12-10-13	Ashland avenue
																																									Construction not started.
																																									Construction not started.
																																									Construction not started.
																																									Construction not started.
		191 09			40.[illegible]								1 027 27																			13,986 80	746 10	14,732.90	8-20-13	9-18-13					
																								6"	Bit.	*315 00	$2.38	6"	Bit.	*45.00	$2.35	315 00	45.00	360.00		11-18 13					Under construction.
																																									Under construction, no paving laid.
																										315.00				45.00		315 00	45.00	360.00	11-18-13	11-18-13					
																																1,703 22	47 65	1,750 87	9- 3-13	9-25-13	11-15-13	3-11-19	3-11-14	12-10-13	

TABLE 3 (Continued)—STATEMENT OF LENGTHS, WIDTHS AND AREAS OF

Contract Number	Contractor	Assistant Engineer in Charge	Name of Improved Street	From	To	Measurements Width Feet	Length of Streets Feet	Length of Streets Miles	Lengths of Returns Feet	Lengths of Returns Miles	Miles Avg 30 Ft Wide	Sheet Asphalt Paving: Name of Asphalt	Depth of Topping	City Base	City Area	City Price	Railway Base	Railway Area	Railway Price	Bituminous Concrete Paving: Name of Asphalt	Depth of Surface	City Base	City Area	City Price	Railway Base	Railway Area	Railway Price	Wood Block Paving: Name of Block	City Base	City Filler	City Area	City Price	Railway Base	Railway Filler	Railway Area	Railway Price	Wood Block Liners Railway Base	Railway Area	Railway Price
70	Southern Paving Construction Co.	Williar	Bond st	N. B. L. Eastern av	S. B. L. Baltimore st																																		
			Chase st	E. B. L. Broadway	W. B. L. Milton av																																		
			[illegible]	N. B. L. Eastern av	S. B. L. Madison st	31.66	881.20	.17			.23	Standard Mexican	1½"	6"	3,700.00	$1.62																							
			[illegible]	E. B. L. Caroline st	W. B. L. Broadway																																		
			Gough st	E. B. L. Central av	W. B. L. Broadway																																		
			[illegible]	E. B. L. Wolfe st	W. B. L. Milton av	38.90	981.50	.18	77.40	.02	.23	Standard Mexican	1½"	6"	1,630.00	1.62	6"	335.00	$1.62																		6"	115.00	$3.40
	Total contract						1,862.70	.35	77.40	.02	.46				5,330.00			335.00																				115.00	
71	Baltimore Asphalt Block and Tile Co.	Smith	Lanvale st	E. B. L. [illegible]	W. B. L. Mt. Royal ave	38.85	711.15	.14	82.10	.02	.18	California	1½"	5"	3,160.90	$1.57																							
			[illegible]	E. B. L. [illegible]	W. B. L. [illegible]	38.93	319.90	.06	52.70	.01	.08	Cal., Moat and Trin.	1½"	5"	1,339.70	1.57																							
			[illegible]	N. B. L. Saratoga st	S. B. L. Franklin st	25.55	970.05	.18	62.00	.01	.17	Montezuma	1½"	6"	2,499.20	1.62																							
			[illegible]	[illegible] Franklin st	N. B. L. Franklin st	23.02	70.45	.01	17.30	.00	.02																												
	Total contract						2,071.55	.39	214.10	.04	.45				6,999.80																								
72	Consolidated Engineering Co.	[illegible]	[illegible] av	[illegible] B. L. Montgomery st	N. B. L. York st																																		
73	Williams & Straus	[illegible]	[illegible] st	N. [illegible] L. Gittings st	S. C. L. Cross st																																		

MATERIALS USED ON PAVING DONE BY CONTRACT FOR THE PAVING COMMISSION.

	Vitrified Brick Paving						Vitrified Block Repaving					Vitrified Block Gutter				Granite Block Paving								Granite Block Repaving								Total Area of Improved Paving			Record Dates.						
	City.			Railway			City.		City and Railway Price	Railway		City.				City.				Railway.				City				Railway													
[illegible]	Base	Area	Price.	Base	Area	Price	Base	Area		Base.	Area	Base	Area.	Price	Name of Block	Base	Filler.	Area.	Price.	Base.	Filler.	Area.	Price.	Base	Filler.	Area.	Price.	Base	Filler.	Area	Price.	City Area	Railway Area	Combined Area	Date of Contract	Date of Starting.	Date of Complet'n	Guaranty Expir.	Assigned to City Eng. Dept.	Assigned to Appeal Tax Court.	Remarks and Intersection Omitted
																																									Construction not started
																																									Construction not started
[illegible]		2.30	$2.30									6"	447.70	$2.35																		4,150.00		4,150.00		11-1[illegible]-13					Under construction
																																									Construction not started
																																									Construction not started
[illegible]	6"	[illegible]	2.30	6	[illegible]	$2.40						6"	[illegible]	2.35																		1,800.00	2,200.00	4,000.00		10-28-13					Under construction
		[illegible]			[illegible]								577.70																			5,950.00	2,200.00	8,150.00	[illegible]-13	10-28-13					
[illegible]		76.30	$2.25									5"	8.20	$2.25																		3,245.40		3,245.40		9-22-13	10-2[illegible]-13			11-11-13	
[illegible]	5"	[illegible]	2.25									5"	42.60	2.25																		1,453.30		1,453.30		10-11-13	11-[illegible]-13			12-10-13	
[illegible]		90.90	2.30							......		6"	308.90	2.30																		2,800.00	"	2,800.00		9-27-13	11-13-13			12-10-13	
[illegible]																								6"	Bit.	[2]287.80	$1.25					287.80	"	287.80		9-27-13	11-13-13			12-10-13	
		[illegible]											359.70													287.80						7,885.50		7,885.50	9-20-13	9-22-13	11-13-13	11-2[illegible]-18	11-2[illegible]-13		
[illegible]																																			1[illegible]-27-13						Construction not started
[illegible]																																			11-1[illegible]-13						Construction not started

TABLE No. 3.—SUPPLEMENTARY SHEET—STATEMENT OF LENGTHS, WIDTHS AND AREA OF MATERIALS

Contract Number.	Assistant Engineer in Charge.	Name of Improved Street.	From.	To.	Measurements.						Sheet Asphalt Paving.								Bituminous Concrete Paving.								Wood Block Paving.									Wood Block Liners.		
					Width.	Length of Streets.		Lengths of Returns.		Miles Av'g. 30 Ft. Wide.	Name of Asphalt	Depth of Topping.	City.			Railway.			Name of Asphalt.	Depth of Surface.	City.			Railway			Name of Block.	City.				Railway.				Railway.		
					Feet.	Feet.	Miles.	Feet.	Miles.				Base.	Area.	Price.	Base.	Area.	Price.			Base.	Area.	Price.	Base.	Area	Price.		Base.	Filler.	Area.	Price	Base.	Filler.	Area.	Price.	Base.	Area.	Price.
A	McGuire	[illegible] al	N. B. L. Lafayette ave	S. B. L. Mosher st	12.50 1[illegible].30	70.40 256.60	.06			.04																												
	Gibbons	[illegible] al	N. B. L. Lafayette ave	S. B. L. Mosher st	18.00	332.20	.06			.04																												
	Total contract					665.20	.12			.08																												
B	Gibbons	[illegible] st	N. B. L. Pratt st	S. B. L. Lombard st	19.95 15.35	272.00 90.50	.07	10.20	.00	.04																												
	McGuire	Hollingsworth st	N. B. L. Pratt st	S. B. L. Lombard st	20.85	373.50	.07	6.00	.00	.05																												
	Gibbons	Grant st	N. B. L. Pratt st	S. B. L. Water st	15.90 10.50	158.00 373.30	.10	11.80	.01	.06																												
	Total contract					1,267.30	.24	28.00	.01	.15																												
D	Gibbons Russel	Intersection of Madison ave. and McMechen st Intersection of Holloway and Saratoga sts			39.00	65.50	.01	17.40	.00	.02																												
	Total contract					65.50	.01	17.40	.00	.02																												
E	McGuire	[illegible] al	E. B. L. Frederick st	Eastern terminus	10.00	165.00	.03			.01																												
		Alley running south	from Smith al. to its southern terminus		10.00	152.20	.03			.01																												
	Total contract					318.10	.06			.02																												
F	Boller	Barre st	W. B. L. Sharp st	P. & O. crossing	40.00	90.00	.02			.02																												
	[illegible]baum	Old [illegible] st	East side [illegible] st	West side Hartford ave	19.95	63.70	.01			.01																												
	McGuire	[illegible]	S. C. L. Madison st	100 ft. south	24.00	98.50	.02			.01																												
	Gibbons	[illegible] st	Intersection of	St. Paul st	28.70	73.20	.02	20.45	.00	.02																												
	Herrman	[illegible] st	Intersection of	Fayette street	39.50	66.03	.01	26.00	.01	.02																												
	Total contract					391.43	.08	46.45	.01	.08																												
G	Gibbons	Lombard st	Intersection of	Greene st	39.10	67.45	.01	13.75	.00	.02		1½"	6"	174.85		6"	26.14																	135.31				

USED ON PAVING DONE BY THE CITY ENGINEER'S DEPARTMENT FOR THE PAVING COMMISSION.*

Name of Block.	Vitrified Block Paving.						Vitrified Block Repaving.					Vitrified Block Gutter			Name of Block.	Granite Block Paving.								Granite Block Repaving.								Total Areas of Improved Paving.			Record Dates.						Remarks and Intersections Omitted.
	City.			Railway.			City.		City and Railway, Price.	Railway.		City				City				Railway.				City.				Railway.													
	Base	Area	Price	Base	Area	Price.	Base	Area.		Base.	Area.	Base	Area	Price.		Base	Filler	Area.	Price.	Base.	Filler	Area.	Price.	Base	Filler.	Area	Price.	Base.	Filler.	Area	Price.	City Area.	Railway Area.	Combined Area.	Date of Contract.	Date of Starting.	Date of Complet'n	Guaranty Expires.	Assigned to City Eng. Dept.	Assigned to Appeal Tax Court.	
																								4"	Cement	*697 00						697 00		697 00		12- 2-12	12-21-12			1- 1-13	*No prices shown on this work, as it was done by the City Engineering Department, with day labor.
	4"	664 11																														664 11		664.11		11-24-13	12-13-13				
		664 11																								697 00						1,361 11		1,361.11		12- 2-12	12-13-13				
																								6"	Bit.	734.00						734.00		734 00		7- 2-13	9- 2-13			9-30-13	
																								6"	Bit.	877.00						877.00		877.00		6- 4-13	7-12-13			8-28-13	
																								6"	Bit.	961.00						961.00		961.00		6-26-13	8- 6-13			8-28-13	Lombard street omitted.
																										*2,572 00						2,572 00		2,572.00		6- 4-13	9- 2-13				
	6"	31.93		6"	[illegible]											6"	Bit.	100.96		6"	Bit.	181.57										132 89	211 96	344 85		5- 2-13	6-14-13				Construction not started
		31.93			[illegible]													100.96				181.57										132 89	211 96	344 85		5- 2-13					
																								6" 6"	Bit. Bit.	188 44 175 56						188 44 175.56		188 44 175 56		10-27-13 10-27-13	11-26-13 11-26-13				
																										*364 00						364 00		364.00		10-27-13	11-26-13				
	Sand 6" 6"	177 33 256.00 403.10														6"	Bit.	305 08						6"	Bit.	*400 00						400 00 177 33 256.00 305.08 403.10		400 00 177 33 256.00 305.08 403.10		12- 3-13 10-14-13 11- 6-13 10-24-13 10-29-13	 10-16-13 11-26-13 12-29-13 11-27-13				Under construction
		836 43																305 08								400 00						1,541 51		1,541 51		10-14-13					
																																174 85	161 45	336 30		12-15-13	12-31-13				Sheet asphalt laid by the Filbert Paving Company

TABLE No. 3—TOTAL SHEET.

TOTALS OF ALL PAVING COMPLETED	Measurements. Lengths of Streets		Measurements. Lengths of Returns		Measurements.	Sheet Asphalt Paving.		Bituminous Concrete Paving.		Vitrified Block Paving.		Granite Block Paving.		Wood Block Paving.		Wood Block Liners.	Vitrified Block Gutters.	Vitrified Block Repaving.		Granite Block Repaving.		Total Areas of Improved Paving.		
	Feet.	Miles.	Feet	Miles	Miles, Avg 30 Feet Wide	City Area.	Railway Area.	City Area.	Railway Area.	City Area	Railway Area.	City Area.	Railway Area.	City Area.	Railway Area.	Railway Area.	City Area.	City Area.	Railway Area.	City Area.	Railway Area.	City. Area.	Railway Area.	Combined Area.
Totals of paving done by contract during 1912	91,108.03	17.25	7,446.20	1.42	21.36	210,302.49	5,713.29	16,291.79		60,750.73	27,253.61	34,270.19	7,821.99		1,389.40	2,664.52	8,191.64	424.05	1.03	10.12	893.96	330,241.01	45,737.80	375,978.81
Totals of paving done by City Engineer's Department during 1912...	333.00	.06			.04	.			. .	.... .	. .	.. ...	.....			.			.	697.00	...	697.00	.	697.00
Totals of all paving done during 1912 .	91,441.03	17.31	7,446.20	1.42	21.40	210,302.49	5,713.29	16,291.79		60,750.73	27,253.61	34,270.19	7,821.99		1,389.40	2,664.52	8,191.64	424.05	1.03	707.12	893.96	330,938.01	45,737.80	376,675.81
Totals of paving done by contract during 1913	127,852.52	24.22	10,214.66	1.93	31.57	200,197.42	12,951.02	62,565.85	30.95	107,634.25	46,665.91	66,399.56	29,704.28	1,703.22	771.66	4,072.85	17,515.32	407.54	11.07	934.40	4,052.66	457,357.56	98,260.40	555,617.96
Totals of paving done by City Engineer's Department during 1913	2,442.07	.46	105.60	.02	.33	174.85	26.14			1,532.47	30.39	406.04	181.57	.	135.31				.	3,336.00		5,449.36	373.41	5,822.77
Totals of all paving done during 1913	130,294.59	24.68	10,320.26	1.95	31.90	200,372.27	12,977.16	62,565.85	30.95	109,166.72	46,696.30	66,805.60	29,885.85	1,703.22	906.97	4,072.85	17,515.32	407.54	11.07	4,270.40	4,052.66	462,806.92	98,633.81	561,440.73

EXPLANATORY REMARKS:

[1] For average prices see Table A; for recapitulation of lengths and areas, see Table B
[2] The price for these wood block liners was included in the bid for sheet asphalt paving
[3] Old granite block repaved as taken from the streets
[4] Old granite block reeled before being repaved.
[5] Bituminous concrete paving laid and sealing coat applied.
[6] Cement concrete was laid by the Eastern Cement Gun Company over the old cobble surface before the bituminous concrete paving was laid
[7] This paving was laid in front of the Western Maryland Railway Company's freight shed and oil house between the curb and building lines.
[8] This paving was laid in front of the Industrial Building, between the curb and building lines.
[9] Old granite block redressed before being repaved.
[10] Bituminous concrete paving laid without applying a paint coat or a sealing coat.
[11] By agreement half the cost of paving this street was borne by the City Engineer's Department.

TABLE No. 4.

GENERAL INFORMATION (Compiled by City Engineer's Department).

The total mileage and area of paved and unpaved streets and alleys in the City of Baltimore, corrected to December 31, 1913, is as follows:

CHARACTER OF SURFACE.	Streets.		Alleys.		Totals.		Under Guarantee, Sq. Yds.	Under Maintenance, Sq. Yds.
	Mileage.	Sq. Yds.	Mileage.	Sq. Yds.	Mileage.	Sq. Yds.		
Allcott's improved pavement	0.48	9,101	....	....	0.48	9,101	....	9,101
Amiesite	0.20	4,600	....	....	0.20	4,600	....	4,600
Asphalt block	16.39	414,348	2.74	18,854	19.13	433,202	....	433,202
Bitulithic	9.98	269,948	....	....	9.98	269,948	119,666	150,282
Bituminous concrete	11.79	242,498	....	....	11.79	242,498	228,305	14,193
Cement surface	....	....	2.95	18,735	2.95	18,735	....	18,735
Cobblestone	190.88	3,452,127	113.24	770,034	304.12	4,222,161	....	4,222,161
Granite block	40.26	954,824	0.68	7,571	40.94	962,395	196,584	765,811
Macadam (bituminous)	1.87	59,061	....	....	1.87	59,061	....	59,061
Macadam (ordinary)	38.60	861,921	0.17	1,360	38.77	863,281	....	863,281
Medina block	0.06	2,039	....	....	0.06	2,039	....	2,039
Sheet asphalt	48.70	1,065,829	....	....	48.70	1,065,829	504,254	561,575
Unpaved	30.94	553,293	18.06	150,295	49.00	703,588	....	703,588
Vitrified block	37.90	885,217	4.50	10,147	42.40	895,364	125,108	770,256
Wood block	1.46	45,581	....	....	1.46	45,581	7,757	37,824
Totals	429.51	8,820,387	142.34	976,996	571.85	9,797,383	1,181,674	8,615,709

NOTE—The classification here made is: Where the thoroughfare is paved and curbed and footways provided it is called a street, regardless of its width. All thoroughfares twenty (20) feet wide and under, which are not curbed, paved and provided with sidewalks, are classed as alleys.

The above table does not include any work of the State Roads Commission, Annex Commission or of this Department for which contracts have been entered into and remain uncompleted December 31, 1913.

This table is based on work done during the year by the City Engineer's Department, the Annex Commission, State Roads Commission and the Paving Commission.

Nineteenth Annual Report

of the

Free Public Bath Commission

To the Mayor and City Council of Baltimore
for the Fiscal Year Ending
December 31, 1913

1797

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER
1914

Free Public Bath Commission of Baltimore

(Instituted by Ordinance of the City Council, May 9, 1900.)

PRESENT COMMISSION APPOINTED OCTOBER 2, 1911

Chairman

EUGENE LEVERING.

Vice-Chairman and Treasurer

WILLIAM H. MORRISS.

Mary Sherwood, M. D.
Jos. E. Gichner, M. D.
Wm. A. Eisenbrandt.
Oregon Milton Dennis.
H. Ross Coppage, D. D. S.

Secretary and Superintendent

Thos. M. Beadenkoff.

STANDING COMMITTEES

Walters Bath No. 1

Wm. A. Eisenbrandt.
Mary Sherwood, M. D.
Oregon Milton Dennis.

Walters Bath No. 2

Jos. E. Gichner, M. D.
Mary Sherwood, M. D.
H. Ross Coppage, D. D. S.

Walters Bath No. 3

Mary Sherwood, M. D.
Jos. E. Gichner, M. D.
Oregon Milton Dennis.

Walters Bath No. 4

Oregon Milton Dennis.
Wm. A. Eisenbrandt.
Mary Sherwood, M. D.

Patterson Park Field House and Pool

Wm. A. Eisenbrandt,
H. Ross Coppage, D. D. S.
Mary Sherwood, M. D.

Greenmount Avenue Baths

H. Ross Coppage, D. D. S.
Mary Sherwood, M. D.
Jos. E. Gichner, M. D.

West Park Recreation House, Hampden

Mary Sherwood, M. D.
Oregon Milton Dennis.
Wm. A. Eisenbrandt.

Portable Baths

Oregon Milton Dennis.
Wm. A. Eisenbrandt,
Jos. E. Gichner, M. D.
Mary Sherwood, M. D.

Public Comfort Stations

Jos. E. Gichner, M. D.
Mary Sherwood, M. D.
H. Ross Coppage, D. D. S.

Winans Beach

Oregon Milton Dennis.
Wm. A. Eisenbrandt.

Gwynn's Falls

Jos. E. Gichner, M. D.

Locust Point

Mary Sherwood, M. D.

The Chairman and Vice-Chairman are ex-officio members of all committees.

NINETEENTH ANNUAL REPORT

OF THE

FREE PUBLIC BATH COMMISSION

BALTIMORE, January 1, 1914.

TO THE HON. JAMES H. PRESTON, *Mayor:*

DEAR SIR—The Free Public Bath Commission, to whom is entrusted the care of the public baths, public laundries and public comfort stations, beg to report as follows:

Each year your Commission has served has recorded increase in facilities, increase in patronage, and increase in public favor at home and abroad.

The year just closed has been especially noteworthy. One of the superintendents of the New York Associated Charities has recently written the following words of appreciation after he had received several letters about our public baths and laundries:

"Your city is a continuous store of information and must pay the penalty for being a laboratory of advanced experimentation in public facilities."

The Commission desire to express here also their appreciation of your personal interest and co-operation in the growth and advancement of our work throughout the city.

COMPARATIVE SUMMARY OF PATRONAGE FOR 1912-1913.

Baths.	1912.	1913.
Walters Baths No. 1, South High Street	248,145	243,672
Walters Baths No. 2, Columbia Avenue	113,473	116,225
Walters Baths No. 3, Argyle Avenue	34,737	35,334
Walters Baths No. 4, West and Marshall Streets	80,412	83,405
Greenmount Avenue Baths—Open 3⅓ months in 1912	15,805	88,184
West Park Recreation Center, Hampden	38,279	44,184
Patterson Park Indoor Showers and Lockers	64,360	60,438
Patterson Park Swimming Pool	120,848	159,022
Four Portable Baths in various locations	58,472	75,398
Three Outdoor Baths; Winans, Locust Point and Gwynn's Falls	117,053	142,947
Total patrons	891,584	1,048,809
Public Comfort Stations.		
Patrons at Market Place	440,429	576,138
Patrons at Greenmount Avenue	63,031	286,875
	503,460	863,013
Total attendance	1,395,044	1,911,822

From the above summary, it will be seen that the indoor shower-baths were used by 746,840 patrons, an increase of 92,000 over the previous year; and the outdoor swimming baths recorded 301,969 patrons, an increase of 64,000 over 1912.

This grand total of 1,048,809 patrons represents large benefits to many classes of the community.

1. To the poor, living in the congested sections, who find in the baths an opportunity for health and cleanliness convenient to their homes.

2. To other thousands who use the public laundries where for a few cents the family washing, drying and ironing may be done outside the cramped quarters of their rooms.

3. Another class is the 300,000 patrons of the outdoor swimming baths, which furnish clean and wholesome recreation in the beautiful public parks or at the harbor's edge.

4. A fourth division of our work is represented by the baths at two athletic recreative centers, where in 1913, 104,000 patrons were recorded.

These two houses are Patterson Park Field House in the extreme eastern section of the city, and West Park Recreation Center in the northern section.

5. Another department of municipal work, under the care of the Public Bath Commission, is scarcely less important than any of the other four, i. e., the public comfort stations.

By a fairly accurate count, 863,000 persons used the two convenience stations last year, one at Market Place and Lombard street, and one at Greenmount and Harford avenues, near Belair Market.

RECEIPTS FROM FEES.

It is gratifying also to report the increasing amounts received year by year from fees paid by patrons who use the various conveniences managed by the Public Bath Commission.

The five classes above mentioned returned fees amounting as follows, which have been returned to the city treasury:

1. Indoor Baths open all the year	$15,792 50
2. Outdoor Baths for summer recreation	2,640 73
3. Public Laundries	1,509 82
4. Recreation Centers	1,350 48
5. Public Comfort Stations	923 76
6. Sale of old material	12 55
	$22,229 84

These receipts show an increase of $3,304.06 over the amount received in 1912.

THE INDOOR BATHS.

The number of patrons of the indoor baths amounted to 746,840, about three-fourths of the total bath patronage, and from a sanitary standpoint these form the most important feature of our municipal service.

They are made up of all classes, young and old: crowds of working men and women; many children from the schools or from the streets; students who live in the city temporarily: seafaring men from the neighboring harbor, the floating population of our city; young men and women of athletic clubs. pupils of public and other schools, all these find cleanliness and comfort, and we may say, better manhood and womanhood in the use of the bath facilities.

These ten bathhouses in operation in the city during summer have sometimes counted 6,000 or 7,000 patrons in a single day, and for the entire year the total of 723,000 show an increase of 92,000 over the year 1912.

It was expected with the increase in number of these bathhouses and with the extension of the sewerage system and a more general installation of bath tubs in homes, that here and there a slight decrease of patronage would result, but this has not been the case.

The first Walters bath opened in 1900 on South High street had a patronage last year of 243,672, but a few thousand less than its maximum for several years past, and at all the other houses there have been increases of patronage over 1912 as follows:

Walters No. 2, Columbia avenue	2,752
Walters No. 3, Argyle avenue (colored)	597
Walters No. 4, West and Marshall streets	2,993
Greenmount avenue, first full year	73,000
Four Portable Baths	16,926

This is an indication that the public need of cleansing baths has not yet been entirely met, and especially in such old settled parts of town as the Fell's Point section, where two small portable baths located there have had during 1913, 59,930 patrons.

THE OUTDOOR SWIMMING BATHS.

The three original sites occupied by our baths at the harbor's edge have now been purchased for commercial uses, and in a year or two we shall be obliged to vacate entirely the harbor sites. Through the kindness of Mr. Colin McLean, we expect to occupy the Locust Point shore south of Latrobe Park for this season.

It is hoped to obtain a portion of the beach at Fort McHenry when this becomes a public park, and there to establish a large swimming beach; this commanding site between the two rivers makes it an ideal location.

The continued advance of commercial interests in the harbor render it necessary to provide bathing and swimming as a clean and sanitary recreation in public parks. Our city has in this regard been in advance of many American cities. Patterson Park in the eastern section and Gwynn's Falls in the southwestern section show by their records of bathers for last season how highly the public appreciate it. There were 205,000 patrons at the two stations.

SWIMMING BATHS FOR COLORED YOUTHS.

There is no provision made for this form of bathing among the colored youth of our city, and the Bath Commission believe that a small concrete pool could be established in the large open yard in the rear of Walters Bath No. 3, on Argyle avenue. This would supply to 20,000 or more colored school children of Baltimore an opportunity for summer swimming.

THE PUBLIC LAUNDRY.

Since the first opening of our permanent indoor baths in 1900, the Baltimore Bath Commission have maintained public laundries for the use of families where facilities for washing clothes were inadequate. This feature of our service has accommodated during the past fourteen years about 140,000 persons who have come from homes where washing facilities are meagre.

This annual patronage, now about 22,500 in number, is composed of three classes. The largest class consists of 8,500 colored women who use the Argyle Avenue Bath House for their family wash. These colored women live in alleys, in crowded tenements in the larger streets, or work as servants, and appreciate the privilege of coming to our laundry, where for a few cents they obtain hot water, the use of tubs, wringers, driers and irons. The patrons, old and young, are typical of the colored population in Baltimore; they are house servants, wives of laboring men, and others, and to no class do the public laundry facilities bring more advantages than to these colored women.

The next largest class who patronize our laundries are the 7,000 or 7,500 women who use the facilities at the three Walters baths on South High street, on Columbia avenue, West and Marshall streets, and Greenmount Avenue Baths. These are all white women from humble homes, chiefly wives of laboring men.

The third class of laundry patrons are the men, 5,000 to 6,000 annually, who wash their own clothing in the laundry at Walters baths on South High street. In some ways this is the most needy class who visit our houses; like the Coolies of India, they carry all their worldly possessions on their persons. At a cost of six cents, or in many cases entirely free, these men, the floating population of city life, get a bath, spend an hour in the laundry washing and drying their underclothing, and walk out again refreshed and clean.

A recent article on public laundry and housing conditions appeared in *The American City*, a New York periodical, and our Baltimore public laundries received high commendation from the writer.

He said, speaking of laundries:

"There about fifteen such institutions in America, five of which, and by far the best of them, are in Baltimore, Md."

Dr. Donald B. Armstrong, the writer of the article, includes in it two photographs of our Baltimore laundries, and he closes with these strong words as a plea for the establishment of similar places in New York city:

"The public washhouse, like the public baths, finds its chief justification in the fact that it gives to the people an opportunity to learn how to be clean and make it possible for them to appreciate the value of health and decency in being physically clean. Physical cleanliness enhances their moral and spiritual tone. They will recognize more acutely their housing defects and will demand even more energetically than at present that equipment for the home which they have learned to use and value outside and the importance of which, for the preservation of health and the maintenance of decency, they have been educated to appreciate."

Baltimore Baths As Models.

From many parts of the United States and Canada, inquiries have come to us asking about the proper construction of swimming pools, the best methods of maintenance, how to arouse popular interest in the establishment of public baths, etc. Such letters have come from New York, Plainfield and Montclair, N. J.; Fall River, Mass.; Delaware, Ohio; Belvedere, Ill.; South Bend, Wis.; Los Angeles, Cal.; Toronto and Brockville, Canada.

A recent note from Tientsin, China, to our vice-chairman, Mr. William H. Morriss, asks the plans of one of our Baltimore baths for use in the erection of similar establishment there. "Something of this kind," says the writer, "is a great need here, for the people are so poor and the houses so small that it is useless to preach personal cleanliness to a great many of them, because they have no place where they could get a bath if they wanted it. I think no better form of social service could be done than to introduce something of the type that you and others have in Baltimore in these bathhouses."

Our economy of management of baths and laundries, our freedom from political or personal influences in making appointments of employees, our careful sanitary regulations as to cleanliness, and withal, the large success resulting, have given our city a national reputation in this department.

Baltimore is glad also to have inaugurated the National Association for the Promotion of Hygiene and Public Baths, which held its second annual convention in this city in May, 1913. There were in attendance 35 delegates representing many American cities.

Meetings were held in the Council Chamber of the City Hall and at McCoy Hall, Johns Hopkins University. Mayor Preston greeted the delegates with a cordial address of welcome, and during the three days addresses were made and discussions were held on subjects connected with sanitation and public baths.

Among the subjects treated were "The Filtration of Water Used in Swimming Pools," "Proper Materials for Construction of Bath Houses," "The Need of Baths in Large Cities," "The Relation Between Public Parks and Athletics and Swimming Baths," "The Unsanitary Conditions of the Negro Life in Large Cities."

The interest aroused by such meetings in various cities where the conventions are held will doubtless result in the establishment or extension of the public baths there. The next meeting of this convention will be held in Newark, N. J., in May, 1914.

Recreation and Field Houses.

In close association with the work of our baths, the Commission at present maintain, or co-operate in the management of three recreation houses. One of these is at the Patterson

Park Field House, a center of athletic sports and games and playground interest, where in 1913, in addition to the 159,000 bathers, 60,438 persons used the lockers and shower-baths.

The second is at Hampden, where at the West Park Recreation Center we employ two attendants for the public baths there. During 1913 there were 44,202 bathers here, of whom one-third were connected with the Public Athletic League and other athletic associations.

At Gwynn's Falls Park a new field house was erected last spring, containing eight shower-baths and 60 lockers for use of athletics, baseball players, tennis players and others who use the playgrounds of the park.

Forty-three thousand three hundred and twenty-eight men and boys and 3,494 women and girls were patrons here during the swimming season, although the second pool and accommodations for women and girls were not open until July 21.

During the past five years the development of athletics under the Public Athletic League, the wider interest in public sports, baseball, football, etc., have made the parks more and more the resort of thousands of young people; shower-baths and swimming pools are among the chief attractions to these thousands; one of the best results of this clean and healthy outdoor recreation for school children and others is their better physical strength and love of outdoor life.

SAFETY FOR BATHERS.

The Commission is glad to report that, notwithstanding the more than a million bath patrons during 1913, no drownings nor serious accident has occurred. In so large a number there are usually some reckless bathers, and only the watchfulness of our efficient guards has prevented accidents.

Probably fifty rescues have been made at the outdoor swimming beaches during the season.

It is more evident each year that parents appreciate the safeguards thrown around outdoor bathing by our Commission, for many thousands of our patrons consist of small boys and girls over whom special watchfulness is needed.

INSTRUCTION IN SWIMMING.

During the season of 1913, two swimming teachers were engaged—Mr. A. S. Lowsley for boys and men, and Miss Margaret Michael for women and girls.

The result of their season's work is summarized by the statement that 1,173 beginners were taught to swim at the bathing stations, of whom 184 are women and girls. During the past four seasons, about 4,000 persons have been taught the useful art of swimming by our instructors; besides this, instruction has also been given in various swimming strokes and diving.

LECTURES ON PUBLIC BATHS.

For a number of years past, members of the Bath Commission have delivered illustrated lectures on public baths in Europe and America, before improvement associations, church clubs, health conventions and similar gatherings in this city and elsewhere.

In these lectures the chairman, Mr. Levering and Messrs. Morriss and Eisenbrandt, Dr. Gichner and the Secretary have taken part. Recently, the Commission has had a part also in the courses of lectures delivered by members of city departments.

These lectures are a valuable advertisement of the work of the Bath Commission, and have helped to enlighten the public as to its scope and character.

PUBLIC COMFORT STATIONS.

Most American cities were slow in establishing public comfort stations; several large cities have as yet made no such provision for the public. The first one in our city was opened in April, 1908, at Market Place and Lombard street.

In September, 1912, a second house was opened at Greenmount and Harford avenues, near Belair Market. Both of them were used by many thousands this past year, nearly a million in all, and they have proven themselves here, as in other cities, especially European cities, a necessary municipal provision for sanitation and comfort.

The Commission is glad to report its co-operation with the Comptroller and Inspector of Buildings in the erection of a third comfort station at the Lexington Market. This neighborhood is one of the most frequented in the city, and doubtless the house to be erected there will prove the most widely used of any thus far erected.

Mr. Thomas C. Kennedy, the architect, furnishes the following description of the new building, Lexington Market Public Comfort Station:

The plans and specifications for this building are now complete and bids for its erection are about to be advertised. The location is the northwest corner of Louisiana avenue and Jasper street, on a lot 22 feet by 60 feet, which will be entirely covered by the new building. Whilst the lot is admirably situated for neighborhood and market people's convenience, it required much study to obtain the greatest amount of accommodation with proper lighting, complicated by the different separate entrances needed, which in this case are increased by the need of an entrance to the market master's office.

As arranged, the women are accommodated at one end of the building, the men at the other, with the market master's office on the second floor, reached by an entrance in the middle.

An improvement in the accommodation afforded by these stations has been effected by dividing both men's and women's rooms so as to provide separately for white and colored, and this has been arranged so that the attendant directly supervises all, without increasing the number of the attendants.

Three free toilets are provided for white women, and two for colored; twelve for white men, and four for colored, and one pay toilet for white women, and three for white men.

Twelve urinals and four free lavatories are provided for white men, four urinals and one free lavatory for colored men, and one free lavatory for white women, and one for colored women.

The interior arrangement combines the most strictly sanitary materials, free from ornamentations, but naturally superior in appearance. All walls are lined with high wainscoting of Mar-Villa marble, a home production from the Beaver Dam quarries, but recently worked, and all stall divisions are of the same material. The porcelain work will be Vitro-China, absolutely impervious and many times stronger than the ordinary porcelain, and the various fixtures will be the best of the latest improvements.

The walls above the marble will be enamelled. The main rooms are lofty, fourteen feet high, and have in addition to the high windows on all free exposures, large skylights with monitor windows opening on the sides.

A certain proportion of indirect radiation, in addition to the direct, assists in ventilation when windows are closed.

A restroom with cot is provided in connection with the female attendant's room.

The steam heating and water heating equipment, with fuel and general storage, are placed in the cellar, and additional storage, together with the market master's office, is placed in the second story, which only covers the south end of the building.

Exteriorly, the aim has been to erect a building which would not be suggestive of an ordinary business structure, but would rather indicate, though not too aggressively, its true purposes.

An Italian treatment has been adopted, using a texture brick with a very liberal trimming of ornamental stone work, the material proposed for which is a concrete stone manufactured in New Haven. The beauty and desirability of this material may be gathered from the fact that Mr. Goodhue (the architect of the proposed Protestant Episcopal Cathedral in Baltimore) and his partner, Mr. Ralph Cram, who have designed so many of the greatest cathedral and other large buildings through the country, have used and continue to use it in much of their best work, both interiorly and exteriorly and the government has approved its use at West Point, the Panama Zone buildings, etc.

RECOMMENDATIONS.

The Commission desires to add these recommendations for the furtherance of their work, several of which were made in last year's annual report:

First—A municipal bath, similar to Walters baths, at or near Broadway Market; this should be equipped with comfort station facilities. We regard this as of first importance, and recommend that this be the next development.

Second—An indoor swimming bath, to be conducted in the neighborhood of No. 1 Bath on South High street. This will be a new development, but we are convinced will be a great boon to that congested neighborhood, where no recreative facilities are available.

Third—The Commission urges the acquisition of a suitable strip of the natural beach on the south side of Fort McHenry, where recreative swimming baths can be permanently established.

Fourth—The development of an open-air swimming bath in the northern or northwestern section of the city.

Fifth—The erection of a public comfort station in the neighborhood of Light Street Wharf, one of the most congested sections in our city.

CO-OPERATION WITH OTHER CITY DEPARTMENTS.

Courtesies have been extended to our Commission by other city departments to whom our thanks are due, especially to the Board of Park Commissioners, the Police Department, the Water Engineer, the Topographical Survey Commission and the Inspector of Buildings.

The statistical tables for 1913 are appended.

(Signed) EUGENE LEVERING,
President Free Public Bath Commission.

STATISTICS

NUMBER OF PATRONS
AT
BATHING STATIONS
AND
PUBLIC COMFORT STATIONS

1913

WALTERS BATHS NO. 1—1913.

131-133 S. High Street.

MONTHS.	Bathers.		Laundry.			
	Men and Boys.	Women and Girls.	Men.	Women.	Total.	Fees.
January	9,768	5,302	782	40	15,892	$492 58
February	8,607	4,389	370	19	13,385	410 01
March	11,704	6,160	639	37	18,540	538 84
April	12,280	6,668	337	39	19,344	567 91
May	15,416	8,236	282	29	23,963	674 30
June	18,670	9,871	264	29	28,834	745 89
July	19,985	11,816	235	15	32,051	672 87
August	17,538	9,405	242	13	27,198	633 84
September	12,847	6,749	255	16	19,867	515 51
October	10,275	4,582	516	23	15,396	471 45
November	9,567	4,380	486	36	14,469	458 96
December	9,429	4,499	758	47	14,733	440 72
Totals	156,086	82,077	5,166	343	243,672	$6,622 88

WALTERS BATHS NO. 2—1913.

900-902 Columbia Avenue.

MONTHS.	Bathers.		Laundry.		
	Men and Boys.	Women and Girls.	For Women Only.	Total.	Fees.
January	4,787	1,257	482	6,526	$279 87
February	4,006	983	450	5,439	224 85
March	5,642	1,445	428	7,515	299 68
April	6,287	1,610	383	8,280	309 61
May	8,787	2,143	319	11,249	388 09
June	11,815	2,806	282	14,903	441 90
July	12,538	3,672	226	16,436	380 88
August	11,926	3,216	214	15,356	373 78
September	8,099	2,027	242	10,368	313 11
October	5,774	1,306	331	7,411	297 02
November	5,172	1,143	301	6,616	271 26
December	4,584	1,098	444	6,126	250 54
Totals	89,417	22,706	4,102	116,225	$3,830 59

WALTERS BATHS NO. 3—1913.

1018-1022 Argyle Avenue.

MONTHS.	Bathers.		Laundry.		
	Men and Boys.	Women and Girls.	For Women Only.	Total.	Fees.
January	1,212	154	747	2,113	$103 16
February	1,017	128	616	1,761	83 51
March	1,523	182	746	2,451	110 34
April	1,884	206	690	2,780	110 30
May	2,285	406	852	3,543	145 29
June	3,026	416	772	4,214	163 90
July	3,075	443	771	4,289	133 20
August	3,175	508	706	4,389	158 56
September	2,142	274	665	3,081	125 29
October	1,687	203	678	2,568	109 35
November	1,497	138	573	2,208	93 97
December	1,191	97	659	1,947	85 30
Totals	23,714	3,155	8,475	35,344	$1,422 17

WALTERS BATHS NO. 4—1913.

West and Marshall Streets.

MONTHS.	Bathers.		Laundry.		
	Men and Boys.	Women and Girls.	For Women Only.	Total.	Fees.
January	2,326	686	295	3,307	$126 73
February	2,120	645	258	3,023	111 32
March	3,091	905	228	4,224	143 73
April	3,458	1,189	186	4,833	150 29
May	5,480	1,921	206	7,607	208 38
June	9,523	3,464	173	13,160	283 90
July	10,622	3,842	176	14,640	249 00
August	9,327	3,518	162	13,007	242 72
September	5,753	1,805	159	7,717	186 72
October	3,487	1,007	208	4,702	159 30
November	2,723	733	207	3,663	138 88
December	2,475	758	288	3,521	132 43
Totals	60,385	20,473	2,546	83,404	$2,133 40

GREENMOUNT AVENUE BATHS—1913.

MONTHS.	Bathers.		Laundry.		
	Men and Boys.	Women and Girls.	For Women Only.	Total.	Fees.
January	3,269	1,067	56	4,392	$162 86
February	2,882	1,037	61	3,980	145 44
March	4,128	1,501	68	5,697	194 02
April	4,788	1,834	63	6,685	218 62
May	6,230	2,502	64	8,796	264 20
June	8,194	3,513	60	11,767	320 92
July	8,566	4,028	72	12,666	288 72
August	8,138	3,282	50	11,470	269 01
September	5,554	2,242	42	7,838	202 28
October	4,225	1,262	66	5,553	205 42
November	3,611	1,182	102	4,895	183 05
December	3,207	1,125	113	4,445	163 26
Totals	62,792	24,575	817	88,184	$2,617 80

West Park Recreation House, Hampden—1913.

Months.	Bathers.			
	Men and Boys.	Women and Girls.	Totals.	Fees.
January	1,591	364	1,955	$12 37
February	1,555	295	1,850	9 91
March	1,975	345	2,320	16 56
April	2,149	499	2,648	19 19
May	2,881	389	3,270	41 42
June	4,871	1,298	6,169	64 74
July	5,595	1,443	7,038	64 40
August	5,654	1,760	7,414	61 65
September	3,240	1,062	4,302	40 86
October	1,823	644	2,467	23 64
November	1,856	525	2,381	20 78
December	1,847	523	2,370	15 68
Totals	35,037	9,147	44,184	$391 20

PATTERSON PARK BATHS—1913.

MONTHS.	Indoor Showers and Lockers.		Swimming Pool.			
	Men and Boys.	Women and Girls.	Men and Boys.	Women and Girls.	Total.	Fees.
January	2,929				2,929	$33 50
February	2,276				2,276	31 03
March	3,104				3,104	46 77
April	3,625				3,625	68 18
May	5,937	322	2,247	135	8,641	126 11
June	7,543	2,049	46,204	6,122	61,918	527 82
July	6,673	2,611	54,135	8,738	72,157	598 52
August	5,871	1,599	29,961	4,511	41,942	373 45
September	4,622	850	6,049	920	12,441	125 11
October	3,308	171			3,479	62 97
November	3,641	98			3,739	54 38
December	3,193	16			3,209	40 18
Totals	52,722	7,716	138,596	20,426	219,460	$2,088 02

GWYNN'S FALLS POOLS—1913.

May to September.

MONTHS.	Men and Boys.	Women and Girls.	Total.	Fees.
May	408	....	408	$8 63
June	12,489	....	12,489	181 71
July	14,840	789	15,629	231 90
August	12,460	1,801	14,261	220 08
September	3,131	904	4,035	56 32
Totals	43,328	3,494	46,822	$698 64

PORTABLE BATHS—1913.

STATIONS.	Men and Boys.	Women and Girls.	Total.
Portable No. 1. Bond St. and Eastern Ave. Open all the year	28,601	19,116	47,717
Portable No. 2. McHenry St., near Mount St. Open 6 months	8,831	2,931	11,762
Portable No. 3. South Regester St. Open 4 months	8,859	3,354	12,213
Portable No. 4. Fremont Ave. and Hamburg St. FOR COLORED PERSONS. Open 2⅓ months	2,543	1,163	3,706
Totals	48,834	26,564	75,398

HARBOR SWIMMING BATHS—1913.

May 30 to September 13.

STATIONS.	Men and Boys.	Women and Girls.	Total.
Winans Beach	74,607	....	74,607
Locust Point	12,769	8,749	21,518
Totals	87,376	8,749	96,125

PUBLIC COMFORT STATIONS—ATTENDANCE, 1913.

MONTHS.	Market Place.		Greenmount Ave.	
	Men.	Women.	Men.	Women.
January	27,809	4,841	22,316	2,974
February	26,365	4,885	16,007	2,659
March	37,909	4,678	17,552	2,701
April	41,667	6,697	15,615	2,742
May	44,294	6,799	15,998	3,002
June	42,272	6,653	17,199	2,769
July	45,589	6,803	22,840	2,573
August	48,541	6,784	24,193	2,695
September	52,273	5,646	24,409	2,686
October	53,339	5,972	21,940	3,331
November	41,064	5,620	25,545	4,125
December	43,158	6,480	26,411	4,593
Totals	504,280	71,858	250,025	36,850

RECEIPTS FROM FEES—1913.

STATIONS.	Baths.	Laundry.	Total.
Walters Baths No. 1, 131-133 S. High street	$6,447 09	$175 79	$6,622 88
Walters Baths No. 2, 900-902 Columbia avenue	3,411 23	419 36	3,830 59
Walters Baths No. 3, 1018-1022 Argyle avenue	856 84	565 33	1,422 17
Walters Baths No. 4, West and Marshall streets	1,877 36	256 04	2,133 40
Greenmount Avenue Public Baths	2,524 50	93 30	2,617 80
Patterson Park	2,088 02		2,088 02
Gwynn's Falls	698 64		698 64
Hampden—West Park	391 20		391 20
Portable Baths.			
No. 1, Bond street and Eastern avenue	440 33		675 48
No. 2, McHenry street, near Mount	121 30		
No. 3, S. Regester street, near Fleet	88 91		
No. 4, Fremont avenue and Hamburg street	24 94		
Harbor Baths.			
Winans Beach	617 35		813 35
Locust Point	196 00		
Public Comfort Stations.			
No. 1, Market Place and Lombard Street			838 07
No. 2, Greenmount Avenue			85 69
Sale of Old Material			12 55
Totals	$19,783 71	$1,509 82	$22,229 84

Comparative Table Showing Increase in Patrons.

1900—Indoor baths	48,827	
1900—Outdoor baths	42,034	90,861
1902—Indoor baths	155,228	
1902—Outdoor baths	52,665	207,893
1904—Indoor baths	242,573	
1904—Outdoor baths	71,723	314,296
1906—Indoor baths	327,172	
1906—Outdoor baths	152,452	479,624
1908—Indoor baths	376,549	
1908—Outdoor baths	213,712	590,261
1910—Indoor baths	494,868	
1910—Outdoor baths	262,316	757,184
1912—Indoor baths	653,683	
1912—Outdoor baths	237,901	891,584
1913—Indoor baths	746,840	
1913—Outdoor baths	301,969	1,048,809

PUBLIC COMFORT STATIONS.

1908	230,005
1909	359,625
1910	421,974
1911	400,903
1912	503,460
1913	863,013

Comparative Table Showing Annual Receipts From Fees at Public Baths.

1901	$2.906 46
1902	4,803 18
1903	5,981 55
1904	7,373 86
1905	8,960 90
1906	11,438 95
1907	12,027 53
1908	13,109 53
1909	13,501 99
1910	14.006 02
1911	17,012 56
1912	18.884 94
1913	22,229 84

COMPLIMENTS OF . . . .

WM. A. LARKINS

COMMISSIONER OF STREET CLEANING

ANNUAL REPORT

OF THE

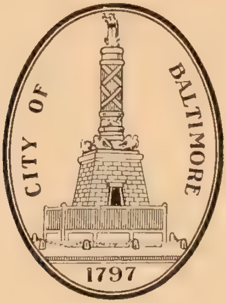
Commissioner of Street Cleaning

TO THE

MAYOR AND CITY COUNCIL OF BALTIMORE

FOR THE

FISCAL YEAR ENDING DECEMBER 31, 1913



BALTIMORE
MEYER & THALHEIMER
CITY PRINTER

1914

OFFICERS AND EMPLOYEES

OF THE

STREET CLEANING DEPARTMENT

FOR THE YEAR 1913

WILLIAM A. LARKINS,
Commissioner of Street Cleaning.

MICHAEL DOONAN,
Deputy Commissioner.

EDWARD F. CALLAHAN,
General Superintendent.

FREDERICK G. WHELAN,
Chief Clerk and Paymaster.

SAMUEL C. MANN,
Assistant Clerk.

WILLIAM E. ANDERSON, Jr.,
Assistant Clerk.

C B. BARAKAT,
Stenographer.

HENRY FINK, Jr.,
Telephone Clerk.

DISTRICT SUPERINTENDENTS—Street Cleaning Division.

WILLIAM WIEBKING,
First District.

JOHN HUNT,
Second District.

ROBERT P. STEWART,
Third District.

THOMAS V. O'CONNELL,
Fourth District.

WILLIAM ROWLEY,
Fifth District.

JOHN T. WHELTLE,
Sixth District.

GEORGE COOPER,
Seventh District.

FRANK A. OTENASEK,
Ninth District.

JAMES CROUCH,
Superintendent of Machine Sweeping.

WILLIAM McDERMOTT,
Inspector.

WILLIAM FABIZAK,
Assistant Inspector.

PETER HOLDEN,
Inspector Caroline St. Dump.

DISTRICT SUPERINTENDENTS—Sanitary Division.

JOHN HOLDEN,
Central District.

JOHN DORSEY,
Western District.

WILLIAM P. FANNIN,
Northern District.

JAMES P. KANE
Southern District.

REPORT.

Department of Public Safety,

Office of the Commissioner of Street Cleaning,

City Hall,

Baltimore, December 31, 1913.

Hon. James H. Preston, *Mayor*.

It is with pleasure that I herewith submit the work of the Street Cleaning Department during the fiscal year 1913.

I feel that the Department has good reasons for feeling proud of itself. It has performed a large ratio of public service, larger than has ever been performed in the history of the Department; and it has performed that service with an appropriation no larger than the one granted for use of the Department two years ago.

When we stop to consider how large a volume of additional work has been piled upon this Department as the result of the big public improvements of the past two years, and when we remember that the city itself, in its natural building development, has multiplied buildings, thereby largely increasing this Department's responsibilities, you can well understand how gratified we feel when we realize that we have closed the year with satisfactory work, and that too without having to call upon the taxpayers for a single penny of additional appropriation. On the contrary, it is our pleasure to announce that we return to the city at the end of 1913 a neat surplus of $71,902.55.

Before going into the details of my report, I want, in a few words, to tell you that I enjoy at the present time the consciousness of knowing that the efficiency of my Department is on the advance. I have a splendid lot of men under me. Those holding the higher positions are quick, active, diligent and loyal. They realize the object towards which I am working, and they are sincerely assisting me in the achievement of that end. The general type of the men holding the lower positions is of a most encouraging average. That is why the Department is able to do so big a volume of work at so low a cost to the city. The public owes far more to the humble street sweeper than the average citizen seems to realize.

THE VOLUME OF THE YEAR'S WORK IS FAR IN EXCESS OF THE YEAR PRECEDING.

More machine sweeping was done during the past year; more washing machine work done on improved pavements; greater amount of garbage and ashes collected, necessitated by the erection of 2,375 new dwellings during the year; more sewers cleaned and debris hauled from the same; additional work of cleaning the markets since September 1. All of this work was accomplished without extra compensation, and was accomplished entirely within the regular appropriation made for the year, which appropriation was the same as that for the year 1912.

FIRST CITY TO USE A GARBAGE AUTOMOBILE TRUCK.

The Board of Estimates authorized the purchase of a 7½-ton auto garbage truck. The truck is the first to be purchased in any city. The truck cost $5,034. It was delivered and put in service last May. It has been thoroughly tested because it was used during the summer of heavy garbage season to receive garbage that had been collected in carts from the householders at 9 and 11 A.M., 1 and 3 P.M. Twenty-four carts, in relays of six, at the hours mentioned above, hauled their loads to the Western Stable, drove in on the main floor, and by means of a sanitary steel chute, dumped their contents into the truck. The truck is water-tight and is kept well covered. The truck was then hurried off to the garbage scow at Back Basin, emptied and returned at regular intervals for other loads. By this means an average drive of five miles was saved for each load made by the above mentioned carts. Heretofore, garbage collected in Forest Park, Walbrook and the extreme northwestern section of the city had to be hauled to the scow at Spring Garden.

The auto garbage truck is also being used at the Lexington and Belair markets on Saturday night, taking the place of twelve street carts for a half day each. This practice enables us to utilize these carts in the work of taking up dirt from the streets and alleys.

The cost of operating the truck per day has been estimated at about five dollars. That represents a saving to the street cleaning as well as the garbage service. It has all been effected by a systematic operation of the truck.

The garbage routes are being constantly increased by the erection of new dwellings. By the use of the truck, however, the collectors have a shorter haul and have been able to make the increased collections; and that, too, without having the expense of putting out additional garbage teams. Horses too have been saved a long drive during the summer months.

MARKETMEN ARE PLEASED WITH THIS DEPARTMENT'S HANDLING OF THE MARKETS.

By an order issued by the Board of Estimates, the Department on September 1 took charge of the sweeping and hosing of the various market sheds. The markets are now hosed daily, weather permitting. It addition to the hosing, a sweeper in white uniform is always in attendance during the market sessions, going about gathering up the litter and rubbish on the footways in the market sheds. This innovation has been the source of much favorable comment from stall owners as well as from the general public who patronize the markets.

RECEPTACLES FOR RUBBISH AT THE MARKETS.

After taking over the cleaning of the markets on September 1, the Department purchased eighty wire cages, placing them at different points on the curb line of the various markets for depositing paper and litter collected in and about the market sheds. This has been an incentive for the stall owners themselves to keep the markets clean, paper and rubbish being deposited in the cages to be taken away by the Department carts after market hours.

During the year the Department also purchased about one hundred additional waste paper receptacles for street corners over town, into which the passing public could cast fruit parings, papers, etc. Upon request of the Women's Civic League, a large number of these cans were put out, and found to be the means of keeping the streets free from litter.

HOW THE HOUSEHOLDERS AND THE PUBLIC GENERALLY CAN HELP MAINTAIN CLEAN STREETS.

Conditions on the newly paved streets in Baltimore became so intolerable that members of the Women's Civic League conferred with his Honor, the Mayor, and, as a result of the conference, the following statement was issued :

"To the Public: The dirty and littered condition of many of our footways and streets should receive the careful attention of the citizens and city authorities, in the interest of sanitation and the public health.

"Special attention is called to the deplorable practice of throwing newspapers and litter on the streets and sidewalks.

"At the request of the Women's Civic League, I am making this public request, that the people of the City of Baltimore refrain from throwing newspapers or other similar material in footways and public streets of the City of Baltimore, and to also call their attention to the fact that this is a violation of the ordinances of the city which renders the person so offending liable to punishment.

"If you want a clean city, sweep in front of your own door.

"I, therefore, call upon all owners and occupants of real estate in this city, as well as other citizens and the public generally, to make a determined and concerted effort to keep their premises and footways abutting thereon clean and free from waste paper and other material.

"The various departments of the City Government will co-operate in every way with the efforts of the citizens to this end.

"JAMES H. PRESTON, *Mayor.*"

HANDLING THE DUST PROBLEM TO THE SATISFACTION OF THE PUBLIC.

Owing to the vast municipal improvements going on in the city, during the past year, His Honor, the Mayor, had a sum of money set apart by the Sewerage Commission, Paving Commission and the Water Department to defray the expenses of this Department in operating three new sprinklers, purchased by the above mentioned departments for the special purpose of keeping down the dust occasioned by this public work. The machines have all been operated by our regular sprinkling gangs, over the streets where work was being done by the above mentioned departments. By this means, the dust nuisance was reduced to a minimum.

MORE SQUEEGEE MACHINES BOUGHT AND MORE WILL BE NEEDED WITH THE CITY'S GROWTH.

The Department purchased three additional Squeegee Washing Machines, during the year, for use on the improved pavements. These improved pavements are also cleaned by the block system; that is to say, a sweeper with broom and handcart cleans a certain number of blocks; the number of blocks cleaned by any one man varying according to location and the amount of traffic.

The Department now owns thirteen of these Squeegee Machines, twelve of which are kept in constant use; one being held in reserve in case of break-down.

Improved pavements are washed four or five times a week. the number of times also varying according to location and traffic conditions. This seems to be the only method in use all over the country for the successful ridding of the streets of dust, thereby keeping them in sanitary shape.

While on a visit to Winnipeg in August, as a delegate to the convention of the League of American Municipalities, I stopped at Detroit, Cleveland, Chicago, Pittsburgh and New York, and observed the machinery in use by the street cleaning departments of these cities. I can truly say, without fear of contradiction, that Baltimore has just as up-to-date machinery as any of the big cities of the country.

NO SPECIAL CLEAN-UP CRUSADE NEEDED.

In the early Spring, members of the Women's Civic League conferred with me in regard to having a regular clean-up of the city. After showing them reports of the number of loads of ashes and of the rubbish that had been hauled during the winter months, it was deemed unnecessary to inaugurate a crusade of this kind. This favorable condition was due to the mild winter last season, the street carts being regularly employed in their work. The season also enabled the street carts, at times, to render special assistance to the carts of the Sanitary Division.

SEPARATION OF GARBAGE AND ASHES.

The ordinance requiring householders to keep ashes and refuse separated from garbage is a source of constant annoyance to the Department. The officers, however, are vigilant in their duties, thereby preventing, to a large degree, any vegetable matter from being deposited on the ash dumps.

THE COMPLETION OF 32 MILES OF NEW PAVEMENTS MEANS MORE WORK FOR THE DEPARTMENT.

During the year just closing, 32 miles of improved streets were turned over to the Department by the Paving Commission and 6 miles of macadam streets by the Commissioners for Opening Streets. These streets are washed by the washing machines. In addition to cleaning by the machines, a certain number of blocks are laid off to a man, with handcart and broom, who keeps the streets in each block in sanitary condition.

BLOCKING OF STREETS AND ALLEYS, DUE TO PUBLIC IMPROVEMENTS, HAMPERS GARBAGE COLLECTING.

Owing to the fact that blocks of streets as well as alleys have been closed for weeks at a time, the Department has had serious trouble in making the household collections of garbage and ashes. This blocking of streets has been due to the work of the sewerage contractors, and the contractors laying improved pavements under the Paving Commission. A number of complaints were received from the householders due to these causes. In every instance, however, after a visit from one of the Department Inspectors, the trouble has been adjusted to the satisfaction of the complainant.

RETURN OF SILVER.

During the year, the Department returned to the owners, after identification, 925 pieces of silverware. This silver was found mixed with garbage which was being deposited on scows of the Southern Product Company.

GARBAGE REDUCTION PLANT.

The annual inspection of the Garbage Reduction Plant at Bodkin Creek took place on Thursday, June 26. After a careful inspection, the plant was found to be in first-class condition, the contractors carrying out the specifications to the letter.

MEDALS FOR EFFICIENCY AWARDED AT THE ANNUAL INSPECTION AND PARADE.

The annual inspection and parade of the Department took place on Monday, May 12, at 2 P. M. The parade formed on Broadway, south of Baltimore street, and on Gough street, east of Broadway.

Twelve members of the Department were presented with "service medals" by his Honor, Mayor James H. Preston. After a splendid address, the medals were pinned on each man's coat by the President of the Second Branch City Council, Mr. John Hubert. The ceremonies were conducted in the presence of a large number of ladies from the Women's Civic League.

After the presentation, the members of the Department in new uniforms, and the cartmen, with newly painted vehicles, paraded through the business section as well a good portion of the residential section of the city. The parade was led by a fine band. The display was interesting to the general public, judging from the large number of people who witnessed the same.

"Service medals" were awarded to employees because of individual efficiency and diligence in their work.

The parade was marshaled by Supt. John T. O'Connor.

REPLACING WORN-OUT STOCK WITH NEW.

Forty head of stock was disposed of during the year, some having died, others sold as being unfit for our work. Fifty-three heavy draft horses were purchased to meet the requirements of our work. The general up-keep of the Department is in better condition than it has been for years. All vehicles of every description were thoroughly overhauled, painted and put in first-class condition for the annual inspection and parade, which took place in May. This work was all done at our main shop, Pratt street and Central avenue.

ADDITIONAL FACILITIES FOR THE COMFORT OF STOCK AND FOR EFFECTIVE WORK.

During the year the Inspector of Buildings erected forty additional stalls for horses on the mezzanine floor of Station "A," Pratt street and Central avenue. This was made necessary for the care of additional stock purchased for the operation of Department work. Alterations were also made by the Building Inspector at Fulton Avenue Stable to accommodate the dumping of garbage carts into auto truck.

The City Engineer's Department paved the floor of the wagon and cart shed at Station "E" with Belgian blocks, tarring the joints, etc., thereby doing away with an unsanitary yard at this location, making it one of the most up-to-date stables in the city.

HANDLING THE APPROPRIATION SO AS TO PRODUCE A SURPLUS.

The total appropriation for the year was $822,658.22. Total expenditures were $762,154.64. Money received from the sale of street dirt, sale of disabled horses, miscellaneous refuse, and special work done, amounted to $6,398.97, the largest amount ever received by the Department from such sources. The total amount returned by the Department from all sources amounted to $71,902.55. The work for the year was accomplished with the same appropriation the Department received for work during the year 1912.

DEATH OF EMPLOYEES.

The year was marked by the death of one superintendent and two foremen, all very efficient men, having been in the Department six and twelve years respectively. Their places were filled by promotion from the ranks.

In presenting my report for the year ending December 31, 1913, I also submit the appended tables, showing the number of employees, the work done, and the cost of the same in each branch of the service.

Respectfully,

WM. A. LARKINS,
Commissioner of Street Cleaning.

WORK DONE IN SANITARY DIVISION, WITH BOUNDARIES OF DISTRICTS, ETC., 1913.

DISTRICT	Cu. Yds. Garbage Removed	Cu. Yds. Ashes Removed	No. Carts and Men Employed	Men Employed at Stables and Shop	BOUNDARIES OF DISTRICT.
CENTRAL John Holden, Supt...	85,996	151,263	60	22	The stable for the maintenance of horses, storage of equipment, etc., of the Central District is known as Station "A," located at Pratt street and Central avenue. The boundaries of the Central District are as follows: Corner Preston and eastern city line south to water front, around water front to Pratt, west on north side of Pratt to Eutaw, north on east side of Eutaw to Biddle, east on south side of Biddle to Cathedral, north on east side of Cathedral to Preston, east on south side of Preston to Jones' Falls, south on west side of Falls to Biddle, east on south side of Biddle to Greenmount, south on west side of Greenmount to Chase, east on south side of Chase to Harford, south on west side of Harford to Eager, east on south side of Eager to Wolfe, north on east side of Wolfe to Preston, east on south side of Preston to place of beginning.
NORTHERN Wm. P. Fannin, Supt.	30,419	109,117	50	3	The stable for the maintenance of horses, storage of equipment, etc., of the Northern District is known as Station "E," located at 1812-1818 Greenmount avenue. The boundaries of the Northern District are as follows: Eastern city line and Preston street, west on north side of Preston to Wolfe, south on west side of Wolfe to Eager, west on north side of Eager to Harford, north on east side of Harford to Chase, west on north side of Chase to Greenmount, north on east side of Greenmount to Biddle, west on north side of Biddle to Jones' Falls, north on east side of Falls to Preston, west on north side of Preston to Cathedral, south on west side of Cathedral to Biddle, west on north side of Biddle to Eutaw Place, northwest on east side of Eutaw Place to Druid Hill Park, around park to east side of Reisterstown road, northwest on east side of Reisterstown road to Second avenue, east on east side of Second avenue to Park Heights avenue, northwest on east side of Park Heights avenue to northern city line, east to eastern city line, south to place of beginning.
WESTERN John C. Dorsey, Supt.	38,924	108,678	46	3	The stable for the maintenance of horses, storage of equipment, etc., of the Western District is known as Station "D," located at 1200-1208 N. Fulton avenue. The boundaries of the Western District are as follows: Western city line and Edmondson avenue, east on north side of Edmondson avenue to Gwynn's Falls, south on east side of falls to Frederick avenue, northeast on north side of Frederick avenue to Bentalou, north on west side of Bentalou to Saratoga, east on north side of Saratoga to Eutaw, north on west side of Eutaw to Eutaw Place, northwest on west side of Eutaw Place to Druid Hill Park, around park to south side of Reisterstown road, west on south side of Reisterstown road to Second avenue, north on west side of Second avenue to Park Heights avenue, northwest on west side of Park Heights avenue to northern city line, north to western city line, south to place of beginning.
SOUTHERN James P. Kane, Supt..	25,192	95 662	41	3	The stable for the maintenance of horses, storage of equipment, etc., of the Southern District is known as Station "C," located at Ridgely and West streets. The boundaries of the Southern District are as follows: Light and Pratt, west on south side of Pratt to Eutaw, north on west side of Eutaw to Saratoga, west on south side of Saratoga to Bentalou, south on east side of Bentalou to Frederick avenue, southwest on south side of Frederick avenue to Gwynn's Falls, along west side of falls to Edmondson, west on south side of Edmondson to western city line, along western city line to southern city line, south along southern city line to water front, around water front to place of beginning.
TOTAL.........	180,531	464,720	197	31	

EXPENDITURES:

Pay rolls..	$150,029 88
Feed..	36,866 63
Shoeing..	4,167 62
Stable rent..	1,350 00
Veterinary..	552 48
Sundries..	2,028 37
Wagon and cart repairs..	4,949 01
New carts..	5,043 00
Horses and mules..	15,025 00
Harness..	1,102 78
Total..	$221,114 77

FIRST DISTRICT.

Route.	No. Times Cleaned.	Sq. Ft. in Route.	Total Sq. Ft. Cleaned.
No. 1	50	980,345	49,017,250
No. 2	52	734,700	38,204,400
No. 3	45	1,192,760	53,674,200
No. 4	44	1,154,668	50,805,392
No. 5	47	721,166	33,894,802
No. 6	35	804,648	28,162,680
No. 7	26	1,191,924	30,990,024
Total			284,748,748
Total square feet markets cleaned			29,281,752
Total square feet smooth pavements cleaned			841,420,320
Grand total			1,155,450,820

The First District comprises all of the territory bounded by Monument street to the water front, and from Central avenue to eastern city line.

The routes of the First District are bounded as follows:

No. 1, Monument street to Pratt street; Broadway to Central avenue.

No. 2, Pratt street to Canton avenue; Broadway to Central avenue.

No. 3, Broadway to East avenue; Baltimore street to Monument street.

No. 4, Broadway to Patterson Park avenue; Baltimore street to Canton avenue.

No. 5, Chester street to Caroline street; Canton avenue to water front.

No. 6, Chester street to Lakewood avenue; Boston street to Eastern avenue.

No. 7, Lakewood avenue to East avenue; Boston street to Eastern avenue.

Canton Market and Broadway Market are cleaned and washed six times a week by the First District.

SECOND DISTRICT.

Route.	No. Times Cleaned.	Sq. Ft. in Route.	Total Sq. Ft. Cleaned.
No. 1	61	1,348,468	82,256,548
No. 2	54	442,596	23,900,184
No. 3	51	1,073,448	54,745,848
No. 4	46	525,942	24,193,332
No. 5	40	819,360	32,774,400
No. 6	31	619,644	19,208,964
No. 7	27	1,084,258	29,274,966
Total			266,354,242
Total square feet markets cleaned			8,160,000
Total square feet smooth pavements cleaned			1,359,334,080
Grand total			1,633,848,322

The Second District comprises all of the territory bounded by North avenue to Monument street, and from Cathedral street to the eastern city line.

The routes of the Second District are bounded as follows:

No. 1, Monument street to North avenue; Cathedral street to Greenmount avenue.

No. 2, Monument street to North avenue; Greenmount avenue to Caroline street.

No. 3, Monument street to North avenue; Broadway to Caroline street.

No. 4, Monument street to Eager street; Milton avenue to Broadway.

No. 5, Gay street to Patterson Park avenue; Eager street to Broadway.

No. 6, Preston street to North avenue; Broadway to Gay street.

No. 7, Monument street to North avenue; Patterson Park avenue to Milton avenue and Monument street.

Northeast Market is cleaned and washed six times a week by the Second District.

THIRD DISTRICT.

Route.	No. Times Cleaned.	Sq. Ft. in Route.	Total Sq. Ft. Cleaned.
No. 2	48	955,949	45,885,120
No. 3	48	612,120	29,381,760
No. 4	55	784,250	43,133,750
No. 5	53	1,449,470	76,821,910
No. 6	54	679,920	36,715,680
No. 7	51	807,690	41,192,190
Total			273,130,410
Total square feet smooth pavements cleaned			1,452,110,400
Grand total			1,725,240,810

The Third District comprises all of the territory bounded by North avenue to the northern city line, and from the eastern to the western city line.

The routes of the Third District are bounded as follows:

No. 2, North avenue from Smallwood street to Oak street, etc.

No. 3, North avenue to Twenty-second street; York road to Harford avenue.

No. 4, North avenue to Twenty-fifth street; St. Paul street to Boone street.

No. 5, North avenue to Twenty-ninth street; St. Paul street to Jefferson Place.

No. 6, Eutaw Place to Mt. Royal Terrace; North avenue to Druid Hill Park.

No. 7, Eutaw Place to Fulton avenue; North avenue to Orem's lane.

FOURTH DISTRICT.

Route.	No. Times Cleaned.	Sq. Ft. in Route.	Total Sq. Ft. Cleaned.
No. 1	53	1,057,450	56,044,850
No. 2	53	879,870	46,633,110
No. 3	36	1,181,010	42,516,360
No. 4	42	1,223,540	51,388,680
No. 5	44	1,200,030	52,801,320
No. 6	32	1,116,060	35,713,920
No. 7	57	1,406,300	80,159,100
Total			365,257,340
Total square feet markets cleaned			23,200,000
Total square feet smooth pavements cleaned			878,523,360
Grand total			1,266,980,700

The Fourth District comprises all of the territory bounded by North avenue to Lafayette avenue, to Pennsylvania avenue, to Franklin street, to Howard street, to Monument street, and from Mt. Royal avenue and Cathedral street to western city line.

The routes of the Fourth District are bounded as follows:

No. 1, Franklin street to Biddle street; Pennsylvania avenue to Cathedral street.

No. 2, Biddle street to Dolphin street; Pennsylvania avenue to Maryland avenue.

No. 3, Dolphin street to Wilson street; Pennsylvania avenue to Mt. Royal avenue.

No. 4, Wilson street to North avenue; Pennsylvania avenue to John street.

No. 5, Lafayette avenue to Laurens street; Pennsylvania avenue to Monroe street.

No. 6, Laurens street to North avenue; Pennsylvania avenue to Monroe street.

No. 7, Pennsylvania avenue, Madison avenue, Linden avenue, Cathedral street, etc.

Richmond Market and Lafayette Market are cleaned and washed six times a week by the Fourth District.

FIFTH DISTRICT.

Route.	No. Times Cleaned.	Sq. Ft. in Route.	Total Sq. Ft. Cleaned.
No. 1	45	941,180	42,353,100
No. 1½	43	683,950	29,409,850
No. 2	25	923,393	23,084,825
No. 3	25	1,116,579	27,914,475
No. 4	20	1,156,520	23,130,400
No. 5	27	1,167,115	31,512,105
No. 6	31	851,568	26,398,608
No. 7	26	891,230	23,171,980
No. 8	45	863,125	38,840,625
No. 9	25	951,500	23,787,500
Total			289,603,468
Total square feet markets cleaned			74,494,770
Total square feet smooth pavements cleaned			250,910,400
Grand total			615,008,638

The Fifth District comprises all of the territory bounded by Lafayette avenue, Pennsylvania avenue, Franklin street to Pratt street, and from Howard street to the western city line.

The routes of the Fifth District are bounded as follows:

No. 1, Franklin street to Pratt street; Howard street to Pearl street.

No. 1½, the same as No. 1, with the addition of a few streets.

No. 2, Greene street to Schroeder street; Saratoga street to Pratt street.

No. 3, Schroeder street to Fulton avenue; Lexington street to Pratt street.

No. 4, Baltimore street to Pratt street; Fulton avenue to Bentalou street.

No. 5, Baltimore street to Lafayette avenue; Fulton avenue to P., B. & W. R. R. tracks.

No. 6, Franklin street to Lexington street; Fremont avenue to Fulton avenue.

No. 7, Lafayette avenue to Saratoga street; Pennsylvania avenue to Fremont street.

No. 8, Baltimore street, Fulton avenue, Frederick avenue, Poppleton street.

No. 9, Lafayette avenue to Franklin street; Fremont avenue to Fulton avenue.

Lexington Market and Hollins Market are cleaned and washed six times a week by the Fifth District.

SIXTH DISTRICT.

Route.	No. Times Cleaned.	Sq. Ft. in Route.	Total Sq. Ft. Cleaned.
No. 1	102	1,083,070	110,473,140
No. 2	119	962,325	114,516,675
No. 3	102	599,770	61,176,540
No. 4	59	1,598,670	94,321,530
No. 5	158	1,704,490	269,309,420
No. 6	98	1,650,790	161,777,420
Total			811,574,725
Total square feet markets cleaned			37,540,100
Grand total			849,114,825

The Sixth District comprises all of the territory bounded by Monument street to the water front, and from Central avenue to Howard street.

The routes of the Sixth District are bounded as follows:

No. 1, Baltimore street to Lancaster street; Central avenue to Jones Falls.

No. 2, Calvert, Monument and Gay streets; Gay, Front and Baltimore streets.

No. 3, Baltimore street to Monument street; Central avenue to Front and Gay streets.

No. 4, Baltimore street to Saratoga street; Howard street to Charles street.

No. 5, Howard street to Paca street; Franklin street to Camden street.

No. 6, Baltimore street to Monument street; Howard street to Calvert street.

Belair Market and Fish Market are cleaned and washed six times a week by the Sixth District.

SIX AND ONE-HALF DISTRICT.

Route.	No. Times Cleaned.	Sq. Ft. in Route.	Total Sq. Ft. Cleaned.
No. 1	300	1,945,975	583,792,500
Docks	....	....	19,063,000
Total			602,855,500
Total square feet markets cleaned			43,876,000
Grand total			646,731,500

District Six and One-half comprises all of the territory bounded by Baltimore street to Pratt street, and from Howard street to Jones Falls.

Hanover Market and Wholesale Market are cleaned and washed six times a week by the Six and One-half District.

SEVENTH DISTRICT.

Route.	No. Times Cleaned.	Sq. Ft. in Route.	Total Sq. Ft. Cleaned.
No. 1	27	708,700	19,134,900
No. 2	27	1,422,690	36,412,630
No. 3	105	1,554,990	163,273,950
No. 4	49	1,242,280	60,871,720
No. 6	48	1,463,990	70,271,520
No. 7	55	1,317,450	72,459,750
No. 8.	22	1,373,940	30,226,680
Total			452,651,150
Total square feet markets cleaned			26,321,200
Total square feet smooth pavement cleaned			159,494,420
Grand total			638,466,770

The Seventh District comprises all of the territory bounded by Pratt street to the southern city line, and from the water front to the western city line.

The routes of the Seventh District are bounded as follows:

No. 1, Fort avenue from Lawrence street to the Fort gate and all other paved streets at Locust Point.

No. 2, York street to Randall street; Light street to Covington street.

No. 3, Lee street to Donaldson street; Light street to Hanover street.

No. 4, Pratt street to Ostend street; Hanover street to Warner street.

No. 5, Light street to Paca street; Pratt street to Lee street.

No. 6, Pratt street to Columbia avenue; Howard street to Bush street.

No. 7, Eutaw and Warner streets to Columbia avenue; Camden street to B. & O. R. R.

No. 8, Carey street to Smallwood street; Pratt street to railroad tracks.

Cross Street Market and Hanover Market are cleaned and washed by the Seventh District.

TRAFFIC SQUAD.

Square feet in district, 2,734,740; number times cleaned, 302; total square feet cleaned, 825,891,480.

The Traffic Squad patrols the business section, taking all the streets from Franklin street to Lexington street, and from Eutaw street to Gay street.

NINTH DISTRICT.

Route.	No. Times Cleaned.	Sq. Ft. in Route.	Total Sq. Ft. Cleaned.
No. 4	32	1,598,670	51,152,440
No. 5	83	1,704,490	141,472,670
No. 6	72	1,650,790	118,856,880
Total			311,486,990
Total square feet markets cleaned			11,069,050
Grand total			322,556,040

The Ninth District is composed of routes 4, 5 and 6 of the Sixth District, and are cleaned at night.

TABLE A.

Report of Work Done in the Street Cleaning Division, Showing Number of Carts Employed in Each Separate District, Total

Month Ending.	District No. 1. Supt.	Cost of Collecting and Removing Street Dirt, Sand, Snow, etc.
1913.		
January 31	Wm. Wiebking	$3,332 00
February 28	" "	2,616 00
March 31	" "	2,520 00
April 30	" "	2,738 00
May 31	" "	3,524 00
June 30	" "	2,904 56
July 31	" "	3,541 00
August 31	" "	2,864 50
September 30	" "	2,921 50
October 31	" "	3,700 00
November 30	" "	2,943 00
December 31	" "	3,676 50
Total for First District		$37,281 06

TABLE A.

Number of Loads Collected and Removed, Number of Men Employed, Cost of Same for Tools and Incidentals for Year 1913.

Amount Expended for Sweeping Machines, Sprinklers and Repairs.	Amount Expended for Tools, etc.	Number of Street Carts and Men Employed.	No. of Scrapers and Sweepers Employed.	Total Number of Loads of Street Dirt, Sand, Snow, etc., Collected and Removed.	Total Amount of Expenditures.
$375 00	$44 00	17	35	3,580	$3,751 00
291 50	45 00	17	34	1,833	2,952 50
640 00	44 00	17	35	1,739	3,204 00
283 00	45 00	17	34	1,675	3,066 00
513 15	13 14	17	35	2,403	4,050 29
608 40	77 32	17	35	1,909	3,590 28
757 30	94 15	17	35	2,375	4,392 45
605 84	75 32	17	35	1,823	3,545 66
605 84	75 32	17	35	1,635	3,602 66
757 30	94 15	17	35	1,972	4,551 45
605 84	75 32	17	35	1,512	3,624 16
757 30	94 15	17	35	1,961	4,527 95
$6,800 47	$776 87	....	....	24,417	$44,858 40

TABLE A—Continued.

Monthly Statement of Work Done in the Street Cleaning Division,

MONTH ENDING.	DISTRICT No. 2. SUPT.	Cost of Collecting and Removing Street Dirt, Sand, Snow, etc.
1913.		
January 31	John Hunt	$3,071 00
February 28	" "	2,513 00
March 31	" "	2,585 00
April 30	" "	2,944 50
May 31	" "	3,808 50
June 30	" "	3,075 50
July 31	" "	3,925 50
August 31	" "	3,175 50
September 30	" "	3,156 75
October 31	" "	4,165 00
November 30	" "	3,341 75
December 31	" "	4,016 00
Total for Second District		$39,778 00

TABLE A—Continued.

with Cost of Same in Each Separate District for the Year 1913.

Amount Expended for Sweeping Machines, Sprinklers and Repairs.	Amount Expended for Tools, etc.	Number of Street Carts and Men Employed.	No. of Scrapers and Sweepers Employed.	Total Number of Loads of Street Dirt, Sand, Snow, etc., Collected and Removed.	Total Amount of Expenditures.
$375 00	$43 00	16	33	3,155	$3,489 00
291 50	45 50	16	33	1,714	2,850 00
366 00	45 00	16	33	1,624	2,996 00
283 00	47 00	16	33	2,199	3,274 50
513 26	13 50	16	33	1,789	4,335 26
605 84	75 32	16	34	2,055	3,756 66
757 30	94 15	16	32	1,764	4,776 95
605 84	75 32	16	34	1,716	3,856 66
605 84	75 32	16	33	2,268	3,837 91
757 30	94 15	16	33	1,756	5,016 45
605 84	75 32	16	33	1,964	4,022 91
757 30	94 15	16	33	1,835	4,867 45
$6,524 02	$777 73	....	....	23,839	$47,079 75

TABLE A—Continued.

Monthly Statement of Work Done in the Street Cleaning Division.

MONTH ENDING.	DISTRICT NO. 3. SUPT.	Cost of Collecting and Removing Street Dirt, Sand, Snow, etc.
1913.		
January 31	Richard Migan	$3,535 00
February 28	" "	2,750 00
March 31	R. P. Stewart	2,784 00
April 30	" "	2,903 50
May 31	" "	3,727 00
June 30	" "	3,067 25
July 31	" "	3,762 00
August 31	" "	3,052 00
September 30	" "	2,985 00
October 31	" "	3,758 50
November 30	" "	3,054 00
December 31	" "	3,829 00
Total for Third District		$39,207 25

TABLE A—Continued.

with Cost of Same in Each Separate District for the Year 1913.

Amount Expended for Sweeping Machines, Sprinklers and Repairs.	Amount Expended for Tools, etc.	Number of Street Carts and Men Employed.	No. of Scrapers and Sweepers Employed.	Total Number of Loads of Street Dirt, Sand, Snow, etc., Collected and Removed.	Total Amount of Expenditures.
$379 00	$41 00	11	47	2,183	$3,955 00
291 50	43 00	11	47	1,117	3,084 50
316 00	44 00	11	47	1,164	3,144 00
284 00	44 00	11	50	1,037	3,231 50
307 00	42 00	11	50	1,366	4,076 00
308 00	42 00	11	50	1,142	3,417 25
365 00	44 00	11	50	1,365	4,171 00
372 00	42 00	11	42	1,022	3,466 00
605 84	75 32	11	42	1,121	3,666 16
757 30	94 15	11	47	1,694	4,609 95
605 84	75 32	11	49	1,372	3,735 16
757 30	94 15	11	50	1,417	4,680 45
$5,348 78	$680 94	....	....	16,000	$45,236 97

TABLE A—Continued.

Monthly Statement of Work Done in the Street Cleaning Division,

MONTH ENDING.	DISTRICT No. 4. SUPT.	Cost of Collecting and Removing Street Dirt, Sand, Snow, etc.
1913.		
January 31	Thomas V. O'Connell	$3,046 00
February 28	" "	2,414 50
March 31	" "	2 408 00
April 30	" "	2,347 50
May 31	" "	3,125 50
June 30	" "	2,642 50
July 31	" "	3,107 00
August 31	" "	2,464 00
September 30	" "	2,477 25
October 31	" "	3,162 00
November 30	" "	2,535 25
December 31	" "	3,108 00
Total for Fourth District		$32,837 50

TABLE A—Continued.

with Cost of Same in Each Separate District for the Year 1913.

Amount Expended for Sweeping Machines, Sprinklers and Repairs.	Amount Expended for Tools, etc.	Number of Street Carts and Men Employed.	No. of Scrapers and Sweepers Employed.	Total Number of Loads of Street Dirt, Sand, Snow, etc., Collected and Removed.	Total Amount of Expenditures.
$378 00	$43 00	15	35	2,263	$3,467 00
292 50	47 00	15	35	1,390	2,754 00
318 00	46 00	15	35	1,363	2,772 00
285 50	45 00	15	35	1,284	2,678 00
513 15	13 14	15	35	1,628	3,651 79
605 84	75 32	15	35	1,371	3,323 66
757 30	94 15	15	37	1,546	3,958 45
605 84	75 32	15	38	1,226	3,145 16
605 84	75 32	16	38	1,331	3,158 41
757 30	94 15	16	38	1,646	4,013 45
605 84	75 32	16	38	1,329	3,216 41
757 30	94 15	16	38	1,557	3,959 45
$6,482 41	$777 87	....	....	17,934	$40,097 78

TABLE A—Continued.

Monthly Statement of Work Done in the Street Cleaning Division.

MONTH ENDING.	DISTRICT No. 5. SUPT.	Cost of Collecting and Removing Street Dirt, Sand, Snow, etc.
1913.		
January 31	Wm. Rowley	$3,375 00
February 28	" "	2,642 50
March 31	" "	2,654 50
April 30	" "	2,825 50
May 31	" "	3,494 00
June 30	" "	2,803 00
July 31	" "	3,489 25
August 31	" "	2,757 50
September 30	" "	2,942 00
October 31	" "	3,933 50
November 30	" "	3,175 50
December 31	" "	3,843 63
Total for Fifth District		$37,935 88

TABLE A—Continued.

with Cost of Same in Each Separate District for the Year 1913.

Amount Expended for Sweeping Machines, Sprinklers and Repairs.	Amount Expended for Tools, etc.	Number of Street Carts and Men Employed.	No. of Scrapers and Sweepers Employed.	Total Number of Loads of Street Dirt, Sand, Snow, etc., Collected and Removed.	Total Amount of Expenditures.
$374 00	$46 00	19	37	2,865	$3,795 00
292 50	45 00	19	37	1,602	2,980 00
321 00	47 00	19	37	1,640	3,022 50
287 00	46 00	19	37	1,672	3,158 50
513 15	13 14	19	37	2,287	4,020 29
605 84	75 32	19	37	1,900	3,484 16
757 30	94 15	19	37	2,296	4,340 70
605 84	75 32	19	37	1,810	3,438 66
605 84	75 32	19	37	1,954	3,623 16
757 30	94 15	19	37	2,578	4,784 95
605 84	75 32	19	37	2,105	3,856 66
757 30	94 15	19	37	2,296	4,695 08
$6,482 91	$780 87	....	....	25,005	$45,199 66

TABLE A—Continued.

Monthly Statement of Work Done in the Street Cleaning Division.

MONTH ENDING.	DISTRICT NO. 6. SUPT.	Cost of Collecting and Removing Street Dirt, Sand, Snow, etc.
1913.		
January 31	John P. Murray	$4,092 50
February 28	“ “	3,109 00
March 31	“ “	2,996 00
April 30	“ “	3,153 00
May 31	“ “	4,035 00
June 30	John T. Wheltle	1,707 00
July 31	“ “	2,140 00
August 31	“ “	1,659 00
September 30	“ “	1,789 00
October 31	“ “	2,239 00
November 30	“ “	1,768 00
December 31	“ “	2,235 00
Total for Sixth District		$30,922 50

TABLE A—Continued.

with Cost of Same in Each Separate District for the Year 1913.

Amount Expended for Sweeping Machines, Sprinklers and Repairs.	Amount Expended for Tools, etc.	Number of Street Carts and Men Employed.	No. of Scrapers and Sweepers Employed.	Total Number of Loads of Street Dirt, Sand, Snow, etc., Collected and Removed.	Total Amount of Expenditures.
$374 00	$53 00	27	43	3,001	$4,519 50
303 50	54 00	27	43	1,666	3,466 50
385 00	60 00	27	43	1,484	3,441 00
299 00	64 00	27	43	1,516	3,516 00
513 15	13 14	27	43	2,122	4,561 29
605 84	75 32	11	24	949	2,388 16
757 30	94, 15	11	24	1,129	2,991 45
605 84	75 32	11	34	896	2,340 16
605 84	75 32	11	34	926	2,470 16
757 30	94 15	11	24	1,135	3,090 45
605 84	75 32	11	24	890	2,449 16
757 30	94 15	11	24	1,020	3,086 45
$6,569 91	$827 87	....	....	16,734	$38,320 28

TABLE A—Continued.

Monthly Statement of Work Done in the Street Cleaning Division,

MONTH ENDING.	DISTRICT NO. 6½. FOREMAN.	Cost of Collecting and Removing Street Dirt, Sand, Snow, etc.
1913.		
January 31	Thos. O'Neill	$2,589 50
February 28	" "	1,923 00
March 31	" "	2,005 50
April 30	" "	2,037 00
May 31	" "	2,626 00
June 30	" "	2,096 00
July 31	" "	2,619 00
August 31	" "	2,024 00
September 30	" "	2,086 00
October 31	" "	2,482 50
November 30	" "	2,092 00
December 31	" "	2,931 00
Total for Six and One-half District		$27,511 50

TABLE A—Continued.

with Cost of Same in Each Separate District for the Year 1913.

Amount Expended for Sweeping Machines, Sprinklers and Repairs.	Amount Expended for Tools, etc.	Number of Street Carts and Men Employed.	No. of Scrapers and Sweepers Employed.	Total Number of Loads of Street Dirt, Sand, Snow, etc., Collected and Removed.	Total Amount of Expenditures.
$365 00	$35 00	15	25	2,992	$2,989 50
287 50	43 00	16	28	1,917	2,253 50
316 50	40 00	14	24	2,590	2,362 00
289 50	41 00	17	25	1,926	2,367 50
513 15	13 14	15	24	2,298	3,152 29
605 84	75 32	14	29	1,900	2,777 16
757 30	94 15	14	29	2,282	3,470 45
605 84	75 32	14	29	1,797	2,705 16
605 84	75 32	14	29	1,767	2,767 16
757 30	94 15	14	29	1,965	3,333 95
605 84	75 32	14	29	1,661	2,773 16
757 30	94 15	14	29	2,061	3,782 45
$6,466 91	$755 87	....	....	25,156	$34,734 28

TABLE A—Continued.

Monthly Statement of Work Done in the Street Cleaning Division,

MONTH ENDING.	DISTRICT NO. 7. SUPT.	Cost of Collecting and Removing Street Dirt, Sand, Snow, etc.
1913.		
January 31	James Cadden	$2,847 50
February 28	" "	2,054 00
March 31	" "	2,160 50
April 30	Geo. Cooper	2,374 00
May 31	" "	3,051 00
June 30	" "	2,519 00
July 31	" "	3,177 00
August 31	" "	2,565 50
September 30	" "	2,598 50
October 31	" "	3,195 50
November 30	" "	2,550 50
December 31	" "	3,270 50
Total for Seventh District		$32,363 50

TABLE A—Continued.

with Cost of Same in Each Separate District for the Year 1913.

Amount Expended for Sweeping Machines, Sprinklers and Repairs.	Amount Expended for Tools, etc.	Number of Street Carts and Men Employed.	No. of Scrapers and Sweepers Employed.	Total Number of Loads of Street Dirt, Sand, Snow, etc., Collected and Removed.	Total Amount of Expenditures.
$365 00	$44 00	23	28	2,593	$3,256 50
289 50	46 00	23	28	1,139	2,390 50
368 50	47 00	22	25	1,351	2,576 00
286 00	44 00	23	26	1,531	2,704 00
513 15	13 14	24	27	2,065	3,577 29
605 84	75 32	23	37	1,743	3,200 16
757 30	94 15	23	37	1,922	4,028 45
605 84	75 32	23	37	1,565	3,243 66
605 84	75 32	23	37	1,634	3,279 66
757 30	94 15	23	30	1,986	4,046 95
605 84	75 32	23	30	1,696	3,231 66
757 30	94 15	23	30	2,047	4,121 95
$6,515 41	$777 87	....	....	21,272	$39,656 78

TABLE A—Continued.

Monthly Statement of Work Done in the Street Cleaning Division,

MONTH ENDING.	TRAFFIC SQUAD. FOREMAN.	Cost of Collecting and Removing Street Dirt, Sand, Snow, etc.
1913.		
January 31	Chas. Langgood	$1,534 00
February 28	" "	1,313 00
March 31	" "	1,315 00
April 30	" "	1,309 00
May 31	" "	1,677 50
June 30	" "	1,319 50
July 31	" "	1,575 00
August 31	" "	1,361 00
September 30	" "	1,314 00
October 31	" "	1,671 00
November 30	" "	1,341 00
December 31	" "	1,672 50
Total for Traffic Squad		$17,402 50

TABLE A—Continued.

with Cost of Same in Each Separate District for the Year 1913.

Amount Expended for Sweeping Machines, Sprinklers and Repairs.	Amount Expended for Tools, etc.	Number of Street Carts and Men Employed.	No. of Scrapers and Sweepers Employed.	Total Number of Loads of Street Dirt, Sand, Snow, etc., Collected and Removed.	Total Amount of Expenditures.
$177 00	$25 00	2	26	224	$1,736 00
156 00	26 00	2	26	199	1,495 00
189 00	27 00	2	26	176	1,531 00
182 00	25 00	2	26	180	1,516 00
221 00	27 00	2	26	228	1,925 50
605 84	75 32	2	26	206	2,000 66
757 30	94 15	2	26	225	2,426 45
605 84	75 32	2	26	182	2,042 16
605 84	75 32	2	26	192	1,995 16
757 30	94 15	2	26	232	2,522 45
605 84	75 32	2	26	201	2,022 16
757 30	94 15	2	26	212	2,523 95
$5,620 26	$713 73	....	....	2,456	$23,736 49

TABLE A—Concluded.

Monthly Statement of Work Done in the Street Cleaning Division,

MONTH ENDING	DISTRICT No. 9. SUPT.	Cost of Collecting and Removing Street Dirt, Sand, Snow, etc.
1913.		
June 30	Frank Otenasak	$1,645 00
July 31	" "	2,079 00
August 31	" "	1,667 00
September 30	" "	1,592 00
October 31	" "	2,038 50
November 30	" "	1,740 50
December 31	" "	2,297 50
Total for Ninth District		$13,059 50

TABLE A—Concluded.

with Cost of Same in Each Separate District for the Year 1913.

Amount Expended for Sweeping Machines, Sprinklers and Repairs.	Amount Expended for Tools, etc.	Number of Street Carts and Men Employed.	No. of Scrapers and Sweepers Employed.	Total Number of Loads of Street Dirt, Sand, Snow, etc., Collected and Removed.	Total Amount of Expenditures.
$605 84	$75 32	16	21	770	$2,326 16
757 30	94 15	16	21	872	2,930 45
605 84	75 32	16	21	663	2,348 16
605 84	75 32	16	21	881	2,273 16
757 30	94 15	16	21	1,017	2,889 95
605 84	75 32	16	21	1,041	2,421 66
757 30	94 15	16	21	1,161	3,148 95
$4,695 26	583 73	....	....	6,405	$18,338 49

TABLE B.

Report of Work, Including All Expenditures in the Street Cleaning Department for Each of the Months of the Year Ending December 31, 1913, Also Amount of Receipts from Sale of Refuse, Etc.

1913 Months	Total No. of Loads of Garbage Removed	Total No. of Loads of Ashes Removed	Total No. of Loads of Street Dirt, Sand, Snow, Ice, etc., Removed	Cost of Collecting Ashes, Garbage, Waste, etc.	Cost of Collecting and Removing Street Dirt, Sand, Snow, Ice, etc.	Incidental Expenses	Cost of Sweeping Machines, Sprinklers, Repairs, etc.	Salaries	Cost of Tools, Repairs, etc.	Cost of Removal of Street Dirt by Scows	Total Cost of Removal of Garbage	Total Cost Destruction of Weeds	Cost of Emergency Fund, Moving Snow, Ice, etc.	Cost of Cleaning Sewers and Inlets, Including Tools	Total No. of Loads Removed from Sewers and Inlets	Total No. of Loads of All Kinds Removed	Total Amount of Expenditures	Total Amount of Money Received and Paid to Comptroller
January	2,583	28,445	22,856	$15,156 77	$27,423 00	$85 21	$2,145 59	$2,252 29	$88 73	$674 13	$5,625 00	......	......	$2,605 75	2,290	56,174	$56,056 47	$547 70
February	2,348	22,319	12,577	15,015 61	21,435 50	65 58	2,165 46	2,186 72	102 47	3,041 29	5,500 00	......	......	2,153 50	2,183	39,427	51,666 13	23 25
March	2,637	21,373	13,131	12,103 40	21,394 50	65 49	1,877 05	2,144 98	116 17	5,046 97	5,500 00	......	......	2,087 00	2,692	39 833	50,335 56	554 10
April	3,020	23,569	13,040	19,284 35	22,551 50	141 62	2,861 11	2,103 38	225 47	......	2,875 00	......	......	2,142 50	2,386	42,015	52,184 93	842 01
May	3,294	17,565	16,186	27,425 41	29,069 00	250 41	4,618 46	2,186 72	118 26	2,332 66	8,250 00	......	......	2,665 75	2,051	39,096	76,916 67	240 70
June	3,606	15,378	13,945	15,292 75	23,632 25	139 00	4,297 19	2,234 98	277 21	2,325 53	5,500 00	......	......	2,020 75	2,302	35,231	55,719 66	165 50
July	5,419	16,578	15,776	20,881 10	29,432 75	68 86	5,085 81	2,268 30	600 57	1.845 06	5,625 00	......	......	2,582 00	2,784	40,557	68,388 64	365 58
August	5,715	12,751	12,700	20,416 25	23,606 00	234 80	4,474 05	2,268 40	627 94	2,060 80	2,750 00	$934 00	......	1,550 20	2,431	33,597	58,922 44	271 10
September	5,170	12,803	13,709	15,959 33	23,866 00	85 16	4,653 29	2,248 40	907 05	2,294 11	8,250 00	......	......	2,048 00	2,260	33,942	60,311 34	123 00
October	4,785	17,425	15,981	21,679 48	30,316 50	49 60	9,457 51	2,218 40	614 05	2,600 43	5,625 00	......	......	3,456 05	2,108	40,299	76,017 02	651 93
November	3,027	17,796	13,771	11,688 53	24,570 50	90 33	14,172 49	2,218 40	98 55	2,417 15	2,750 00	......	......	4,333 31	1,976	36,570	62,339 26	1,571 75
December	3,756	23,995	15,567	26,211 79	35,900 13	371 39	4,814 82	2,218 40	2,713 93	5,289 31	8,250 00	......	......	7,526 75	1,986	45,304	93,296 52	1 042 35
Total	45,360	229,997	179,219	$221,114 77	$313,197 63	$1,647 45	$60,622 83	$26,549 37	$6,490 40	$29,927 44	$66,500 00	$934 00	......	$35,171 56	27,449	482,045	$762,154 64	$6,398 97

Note.—No snow or ice removed during January and February, 1913, by street carts.
Number loads of ashes removed by street carts during January, February and March, 1913,—13,824 loads.

TABLE C.

Financial Statement of Department of Street Cleaning Appropriations from January 1, 1913, to December 31, 1913.

	Amount of Appropriations.	Expended from January 1, 1913, to December 31, 1913.	Credit Balances, December 31, 1913.	Revenue from Sales of Refuse.
Collection of ashes and garbage	$227,483 22	$221,114 77	$6,368 45	$547 70
Removal of garbage	66,500 00	66,500 00		23 25
Street carts and men	135,400 00	127,312 00	8,088 00	554 10
Sweepers and scrapers	212,628 00	185,885 63	26,742 37	842 01
Sweeping machines and sprinklers	63,634 00	60,622 83	3,011 17	240 70
Cleaning sewers and inlets	37,368 00	35,171 56	2,196 44	165 50
Tools and repairs	8,085 00	6,490 40	1,594 60	365 58
Incidental expenses	2,720 00	1,646 64	1,073 36	271 10
Removal of waste	30,000 00	29,927 44	72 56	123 00
Emergency Fund	10,000 00		10,000 00	651 93
Destruction of weeds and grass	2,000 00	934 00	1,066 00	1,571 75
Salaries	26,840 00	26,549 37	290 63	1,042 35
Total	$822,658 22	$762,154 64	$60,503 58	$6,398 97

Total amount appropriation	$822,658 22
Total amount expended	762,154 64
Total unexpended balance	$60,503 58
Total revenue from sales of refuse	6,398 97
Total transferred to City Register	$66,902 55

TABLE D.

SUMMARY, 1913.

Total number of cubic yards of garbage collected and removed	180,531
Total number of cubic yards of ashes and refuse collected and removed	464,720
Total number of cubic yards of street dirt, snow, sand, etc., collected and removed	268,828
Total number of cubic yards removed from sewers and inlets	27,449
Total number of cubic yards of all kinds removed	941,528

Total amount paid for collection of garbage, ashes, etc.	$221,114 77
Total amount paid for removal of garbage, etc.	66,500 00
Total amount paid for removal of street dirt, sand, etc.	313,197 63
Total amount paid for sweeping and sprinkling streets by machines	60,622 83
Total amount paid for tools and repairs	6,490 40
Total amount paid for incidental expenses	1,646 64
Total amount paid for salaries	26,549 37
Total amount paid for cleaning sewers and inlets, including tools	35,171 56
Total amount paid for removal of street dirt by scows	29,927 44
Total amount paid from Emergency Fund	....
Total amount paid for destruction of weeds	934 00
Total amount paid for 1913	$762,154 64
Total amount received for sale of refuse	6,398 97

Total number of garbage carts and men employed in 1913	197
Total number of street carts and men employed in 1913	128
Total number of sweepers and scrapers employed in 1913	292
Total number of sewer men employed in 1913	33
Total number of machine drivers, etc.	28
Stablemen, etc., Sanitary Division	31
Total	709

TABLE F.

TOTAL NUMBER OF SQUARE FEET OF STREETS SWEPT BY MACHINES EACH MONTH FROM JANUARY 1, 1913, TO DECEMBER 31, 1913.

MONTH.	SQUARE FEET.		AMOUNT.
January	134,457,143	Cost per month	$2,145 59
February	88,111,319	Cost per month	2,165 46
March	198,814,073	Cost per month	1,877 05
April	236,218,163	Cost per month	2,861 11
May	295,999,448	Cost per month	4,618 46
June	286,425,287	Cost per month	4.297 19
July	273,979,493	Cost per month	5,085 81
August	268,096,269	Cost per month	4,474 05
September	293,543,667	Cost per month	4,653 29
October	264,346,203	Cost per month	9,457 51
November	228,771,169	Cost per month	14,172 49
December	245,768,822	Cost per month	4,814 82
Total	2,814,531,056	Total cost	$60,622 83

DEPARTMENT OF STREET CLEANING—SQUEEGEE MACHINES.

Route.	Sq. Yds. in Route.	No. Times Cleaned.	Total Sq. Yds. Cleaned.
No. 1	79,111	75	5,933,325
No. 2	58,601	82	4,805,282
No. 3	56,333	92	5,182,636
No. 4	57,291	76	4,354,116
No. 5	57,151	90	5,143,590
No. 6	55,451	81	4,391,531
Total			29,810,480

STATEMENT OF LIVE STOCK, DECEMBER 31, 1913.

MONTHS.	Bought.	Sold.	Died.
January	....	1	....
February	....	....	1
March	....	7	2
April	12	2	1
May	....	....	1
June	....	....	1
July	6	1	2
August	8	....	....
September	8	1	5
October	9	....	1
November	....	7	4
December	10	....	4
Total	53	19	22
On hand December 31, 1912	332		
	385		
Died and sold, 1913	41		
On hand December 31, 1913	344		

NUMBER OF DEAD ANIMALS, ETC., COLLECTED BY SCAVENGERS FOR 1913.

4,252	Dogs.
10,617	Cats.
523	Rats.
192	Fowls.
21	Goats.
12	bbls. Crabs.
98	Guinea Pigs.
1,005	lbs. Meat.
2	bbls. Fish.
6	bags Fish.
3	bunches Fish.
1	Hog.
3	Pigs.
525	Rabbits.
1	bag Rabbits.
1	bbl. Rabbits.
418	Turtles.
115	Frogs.
45	Pigeons.
1	Colt.
1	Horse Head.
1	Horse Leg.
4	Bull Heads.
1	Monkey.

CONTRACTS IN FORCE IN THE STREET CLEANING DEPARTMENT, DECEMBER 31, 1913.

Contractor.	For.	Time.	Amount.	Expires.
Southern Product Co	Removal and final disposition of garbage, dead animals and market refuse	Ten years from Jan. 1, 1908	$646,000	Dec. 31, 1917.
Fred Beck & Co	Cylinder brooms	One year from Aug. 8, 1913	$13.00 per broom	Aug. 8, 1914.
Fred Beck & Co	16-inch brooms	One year from June 1, 1913	$ 3.70 per dozen	June 1, 1914.
Fred Beck & Co	30-inch brooms	One year from Aug. 21, 1913	$ 7.65 per dozen	Aug. 21, 1914.
Arundel Sand and Gravel Co	Removal of street dirt by scow	One year from Aug. 8, 1913	$ .29 per cu. yd.	Aug. 8, 1914.
Wm. Hopps Grain and Hay Co	Hay, feed and straw	Three months fr. Dec. 1, 1913	$17,363.10	March 1, 1914.
R. W. Norris & Sons (Schedule C.)	Iron and steel	One year from April 1, 1913	$1,250.38	April 1, 1914.
R. W. Norris & Sons (Schedule D.)	General supplies	One year from April 1, 1913	$2,935.70	April 1, 1914.
R. W. Norris & Sons (Schedule F.)	Wagon and cart supplies	One year from April 1, 1913	$2,047.29	April 1, 1914.

E. Scott Payne Co......... (Schedule G.)	Tools and hardware.....	One year from April 1, 1913...	$507.45	April 1, 1914.
Bolton Bros............... (Schedule H.)	Paints and oils............	One year from April 1, 1913...	$1,053.75.........	April 1, 1914.
Francis T. Lynch......... (Schedule I.)	Carts, cart bodies and sweeping machines......	One year from April 1, 1913...	$5,558.98.........	April 1, 1914.
Levering Bros.............	Dump contract...........	One year from Jan. 1, 1913....	$1,486 00.........	Dec. 31, 1913.

CITY OF BALTIMORE, DEPARTMENT OF CHARITIES AND CORRECTION

14TH ANNUAL REPORT, SUB-DEPARTMENT OF

SUPERVISORS OF CITY CHARITIES

TO THE MAYOR AND CITY COUNCIL
OF BALTIMORE

FOR FISCAL YEAR ENDING DECEMBER 31, 1913

MEYER & THALHEIMER
BALTIMORE
CITY PRINTER

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SUPERVISORS OF CITY CHARITIES

J. HALL PLEASANTS, M. D., PRESIDENT.
MRS. DANIEL MILLER,
JOHN BLACK,
CARY B. GAMBLE, JR., M. D.,
ELISHA H. PERKINS,
ANTON G. RYTINA, M. D.,
DAVID STREETT, M. D.,
JAMES R. WHEELER,
J. WHITRIDGE WILLIAMS, M. D.

Bay View Committee:

John Black, *Chairman*,
Cary B. Gamble, M. D.,
J. Whitridge Williams, M. D.,
Mrs. Daniel Miller,
Anton G. Rytina, M. D.

Hospital and Dispensary Committee:

J. Whitridge Williams, M. D., *Chairman*,
Cary B. Gamble, M. D.,
James R. Wheeler,
David Streett, M. D.

Children's Institutions and Children's Committee:

Mrs. Daniel Miller, *Chairman*,
Cary B. Gamble, Jr.
Elisha H. Perkins,
Anton G. Rytina.

Office Committee:

Elisha H. Perkins, *Chairman*,
John Black,
James R. Wheeler,
David Streett, M. D.

The offices of the Supervisors are on the second floor of the Court House, Room 241.

Hours: On week-days, 9 A. M. to 3 P. M.; on Saturdays, to 1 P. M.

REPORT

Baltimore, December 31, 1913.

To the Honorable Mayor and City Council:

Gentlemen—To the Supervisors of City Charities is entrusted the care of certain classes of the dependents of Baltimore city for which private charity fails to provide. The following dependents come under the charge of the Supervisors by the terms of the City Charter:

Indigent aged and infirm.
Indigent sick.
Indigent insane.
Dependent children.
Temporary care of homeless men.
Transportation of non-resident poor to their homes.
Dependent blind.
Temporary care of wayward women.

To care for these dependents the Supervisors not only directly maintain and conduct institutions at Bay View and medical agencies or dispensaries in various parts of the city, but also contract on a per capita basis with various State and private institutions for the care of the sick, of the insane, of homeless men and of dependent children. In addition to the institutional care provided for certain dependent children, the Supervisors place large numbers of such children in free private homes, where they are carefully supervised and watched by trained visitors.

Bay View.

The improvements at Bay View have been actively continued during the year 1913.

Service Building.

The new kitchen and dining-room building, known as the Service Building, has been completed, and was brought into service in June. This building has in every respect fulfilled the purposes for which it was constructed, and was moreover built within the appropriation of $75,000, which was made for it in the year 1912. It serves a two-fold purpose. In the first place it has provided for the institution a thoroughly modern service building, with a first-class kitchen, bakery, ice and refrigerating plant equipped with the most complete and efficient labor-saving machinery, and with attractive and ample dining-room facilities as well. This Service Building not only meets the present requirements of the institution, but will be sufficient to take care of the needs of the institution for many years to come. The opening of this building has benefited the institution in another way. The various rooms in the old main building which were previously used as dining rooms are now available for dormitory purposes, and the opening of the new building has thus done much to relieve the overcrowding in the main building, which has been so justly criticised in the past.

Cow Barn.

The new cow barn, for the construction of which $12,500 was appropriated in the year 1913, has been practically completed and is a credit to the city. The building has been located about 400 yards to the northwest of the power-house, in a spot where it is protected from the winter winds. The cow barn proper will house fifty cows. It was planned by the architects, Messrs. Parker, Thomas and Rice, with the co-operation of the experts of the Dairy Division of the United States Department of Agriculture, and of the Maryland Agricultural College, and represents the latest and most approved ideas of sanitary construction. The feed barn adjoining has been built sufficiently large to meet the needs of an additional cow barn unit doubling the accommodation for cows, which the institution will probably require in a few years. The new barn will probably not be occupied until the spring, as the grading about the building has not yet been completed. A cinder road has been constructed to the barn.

Bungalow.

The bungalow for the physicians of the Tuberculosis Hospital has been completed, and will be occupied by January 1. This is a one-story building situated about 200 feet to the west of the Tuberculosis Hospital. The physicans in charge of the Tuberculosis Hospital have hitherto been housed about a quarter of a mile distant from the Hospital in the overcrowded Administration Building. Their location in this new building will not only add greatly to their comfort, but will add to the efficiency of the medical service. The cost of the bungalow proved to be about $5,000, or some $1,500 greater than the $3,500 appropriated. This difference was allowed by the Board of Estimates from the Contingent Fund, but as there was a balance left over from the appropriation for the cow barn, which was built for less than the appropriation allowed, the aggregate cost of these two new improvements has not exceeded the total amount appropriated.

Improvements to Main Building

In the appropriations for 1913, $29,000 was allowed for improvements to the main building, or old almshouse. The necessity for a complete renovation of this building has been called attention to in previous reports. Some of the more pressing needs are the installation of a ventilating system; new plumbing involving the construction of two new brick annexes; new flooring throughout, and also new fire-proof stairways, and the installation of a sprinkler system and high pressure standpipes for better fire protection of the building. The total cost of these improvements will probably exceed $150,000, and are a vital part of the plans for the improvement of Bay View included in the carefully drawn up scheme which has been worked out for the improvement and development of the institution. The appropriation for 1913, just referred to, has enabled the Supervisors to make a start in repairing and improving the main building. A complete sprinkler system is being installed in the halls and corridors throughout the entire building, as well as throughout the basement and roof space. Fire doors have also been installed, which will permit the division of each floor into five separate sections. The standpipe high pressure fire service in this building, as well as in some of the other buildings at Bay View, has been increased in capacity. Several additional fire plugs with direct connections with the reservoir have been placed immediately in front of the main building, which will permit the steamers of the city Fire Department to operate in the most effective way in the case of fire in this building. These measures for the better fire protection of the institution have been carried through by the advice of Mr. Charles L. Reeder, consulting engineer of the Supervisors, with the co-operation of the Board of Fire Commissioners. It is hoped that the new system will be in complete operation within a short time, as the need of better fire protection at the institution is felt to be an urgent one.

For the year 1914, $50,000 has been appropriated by the Board of Estimates for improvements at Bay View. The greater part of this appropriation will be spent in improvements upon the main building The report of the Supervisors for 1912 shows in detail the improvements planned, to which brief reference has just been made. It seems wise to take up the improvements to the main building in two sections. The condition of the east, or men's wing, is rather worse than that of the women's wing, so that the work will be begun there.

Ventilating System—It is proposed to install a ventilating system in the east wing as soon as possible. The stack of the old power-house, which was formerly located immediately in the rear of the main building, acted as a ventilating shaft for the entire building. Since the power-house was abandoned about two years ago, and the stack torn down to make room for the new Service Building, the old building has had no ventilating system, and conditions in respect to ventilation during the winter months have become almost unbearable. The old system of ventilating ducts are insufficient, and an entire new system will have to be installed. Work will be begun on this early in the coming year.

Plumbing—The plumbing in the main building requires complete reconstruction. The present plumbing is not only absolutely unsanitary, but is also entirely inadequate for the requirements of the 1,200 people housed in this building. The bathrooms and toilets are now located in two shallow brick annexes in the rear of the sun porches, in the wings of the main building. It will be necessary to enlarge these two annexes to make sufficient room for the bath tubs, showers, wash basins and toilets required. It is proposed to remodel and equip with modern plumbing the east wing during the coming year. In addition to the equipment required on each floor, to meet the needs of the inmates, there will be constructed on the ground floor bathrooms where new inmates can be taken for their bath on first entering the institution. At the present time all the inmates of the infirmary or almshouse on the men's side, and all new inmates, are bathed in a small bathhouse situated several hundred feet from the main building, which is not only undesirable in the winter from the standpoint of health, but also greatly increases the work of the attendants. This antiquated system can now be done away with.

Floorings—Sample floorings of different makes of composition flooring will be laid in one of the corridors of the east wing of the main building, where they will be subjected to equal and severe wear. It is hoped that from the floor materials to be thus tested, that a flooring best suited for the entire building can be selected.

Other Bay View Improvements.

Coal Conveyer and Lavatories—Appropriations have been secured for erecting a shed over the coal conveyer at the new power-house, and also for building lavatories in the yards used for recreation purposes in the rear of the main building.

Furnishings and Automobile Ambulance—Appropriations have also been made for furnishing the new Service Building and the new bungalow, and allowance has also been made for the purchase of an automobile ambulance for conveying patients to the institution. The latter will greatly increase the efficiency of the medical work, and will save an enormous amount of time.

Bay View Grounds—The condition of the Bay View grounds has been far from satisfactory. The construction by open cuts of a system of tunnels from the power-house to the several buildings of the institution, the installation of the new sewerage system connecting the various buildings with the outfall sewer, the installation of the new high pressure fire lines, and the erection of several new buildings, have resulted in widespread defacement of the grounds and lawns. During the past year, much has been done to improve conditions, but a great deal still remains to be done. An appropriation of three thousand dollars for the improvement of the inmates' recreation grounds in the rear of the main building will help greatly to improve the appearance of the whole place. It is proposed to regrade these recreation grounds, to eliminate surface drainage, and to construct a system of grass-plots and cement walks with benches for the use of inmates.

The present boardwalk, from the front gate to the main building, is in such condition as to make its use dangerous. It is planned to replace this with a concrete walk, and also to build concrete walks connecting the various other institutional buildings with the main building.

In recent years, the number of cases committed to Bay View for misdemeanors has shown a great reduction, as the present law forbids the commitment of any able-bodied individual to Bay View. The necessity for bolts, bars and high fences is therefore no longer felt. It is proposed to tear down the numerous unsightly and dilapidated fences which surround the buildings, except those around the buildings used for the care of the insane, and to replace the fences with hedges. This should add greatly to the appearance of the whole place.

The gradual removal of the farm buildings from their present location, between the main building and the general hospital, to that portion of the grounds where the new cow barn is situated, is contemplated.

The reorganization of the medical and nursing staff which was inaugurated a few years ago has proven highly successful. The change in the character of the infirmary or almshouse population, owing to the exclusion of all able-bodied individuals from the institution, has resulted in an increasing difficulty in having the orderly work of the institution done by inmates, as was formerly the case. This makes necessary the employment of additional labor, and naturally adds to the cost of maintaining the institution. Provision has been made in the appropriations for 1914 for several new positions, which it has been found necessary to create to properly conduct the institution. Several salary increases which were asked for were not allowed. This will not only make it difficult for us to retain the services of several good officers, but will also make it difficult to secure capable persons to fill vacancies in these positions.

The expense of conducting Bay View has increased rapidly during the year. This has been largely due to the increase in the cost of foodstuffs. Many articles of food consumed in large quantities, especially meats, show an increase of from 25 per cent. to 40 per cent. over the preceding year.

The Insane.

Attention was called in the last annual report to the fact that the loans authorized by the Legislature in 1910 and 1912 were not sufficient to provide State care for all the indigent insane in Maryland, and that relief from the overcrowding at Bay View was not in sight. The State Lunacy Commission, in their efforts to remove all the insane from the various county and local almshouses to State institutions, have overlooked conditions at Bay View. In order to provide State care for the indigent insane of the State at Bay View and elsewhere, it will be necessary for the Legislature to appropriate at least $600,000 for new buildings. No question of more urgent importance will come before the Legislature at its coming session than this. The buildings at Bay View for the care of the insane are totally unsuited to modern methods of treatment, and one of the buildings is in such bad condition that its use should be discontinued as soon as possible. Apart from humanitarian considerations, it is obviously unfair that provision should be made by the State for the care of the indigent insane of the counties in modern State hospitals with funds largely provided by the tax-payers of Baltimore, while about 400 insane from Baltimore are maintained at Bay View entirely at the expense of the city.

Institutions.

For the care and treatment of the various city charges outside of Bay View, contracts on a per capita basis have been entered into with thirty-six institutions. Under the City Charter lump appropriations to the institutions dealing with dependent children, the insane, with the sick in hospitals or dispensaries, with homeless men, with unfortunate women, with the care of the dependent blind, are forbidden, and such institutions as the city contracts with for the care of these classes must be paid on a per capita basis only for work actually done. The Supervisors have exercised a rigid supervision over these institutions, and have determined that each case cared for was deserving of city aid.

Child-Placing.

Provision has been made for the care of dependent children who have become city charges, by either placing them in free private homes or in institutions. In general, it may be said that the children who have become city charges have been committed to the care of the Supervisors by the courts or otherwise because private charity has failed to make provision for them. In deciding whether a child shall be placed in an institution or in a free private home, the individual needs of each child are carefully considered, but whether placed in private homes or in institutions, all such children remain in charge of and under the authority of this Department, and frequent visits by trained agents are made to the private homes and to the institutions to make sure that proper care and attention are being bestowed.

The Supervisors believe that where the home has been broken up, the normal child is being given the best chance in life if brought up in a good private home. This policy has resulted not only in giving the child a greater advantage in its future struggle in the world, but has resulted in the saving to the tax-payers of a large amount which was formerly spent in the maintenance of children in institutions. Whether placed in a free private home or institution, the religious antecedents of the child are always considered.

In 1913 the Supervisors were requested to assume charge of 234 children. By careful investigation of these cases, however, the number which were actually accepted as city charges was reduced to 81; private charity providing for 95 without cost to the city, while relatives having suitable homes were induced to take charge of 58 children, and in this way many families were held together which would otherwise have been disrupted. In addition to this number, 36 children in institutions were returned to their relatives, and the families reunited. Suitable free private homes, other than those with relatives, were found for 80 children. Including those children who have come under our control in previous years, there is now a total of 560 children who are wards of the city and under the care of the Supervisors. Of this number, 284 are in good private homes, without cost to the city, except the comparatively trivial expense which visiting and supervision by the trained agents of the Department entail. Two thousand one hundred and twenty-one visits were made by these agents in the interest of these 560 children.

In addition to the institutions contracted with last year, a contract has been made this year with St. Katharine's Home for the care of eight colored girls.

In the year 1913, in addition to the hospitals and dispensaries previously contracted with, a contract was entered into with the Franklin Square Hospital for ten beds, to meet the increasing need for hospital accommodations in the southwestern part of the city. It was also found advisable to add the Locust Point Dispensary to the dispensaries contracted with by the city, to meet the urgent needs of the Locust Point territory.

The Supervisors have continued to contract with the Friendly Inn for the care of homeless men.

Under the Charter the Supervisors are entrusted with the expenditure of a fund of $1,000 to provide transportation for certain non-resident poor and destitute to their homes, when these are situated outside the City of Baltimore; $510.73 was spent during the year for this purpose.

During the year 1913, as in previous years, the Supervisors have recommended to the Mayor twelve families among the deserving poor which, under the terms of the will of the late Orville Horwitz, are to enjoy the interest from a fund of twenty thousand dollars left by him for this purpose.

Few changes of importance have been made during the year in the management of our city offices located in the Court House and in the City Hall Annex. The cost of maintaining these offices was $10.317.89 during the past year. This sum has been largely expended for the salaries and traveling expenses of clerks and trained agents, whose duty it is to make a thorough investigation of the status of all persons applying for aid, to visit and inspect the numerous private institutions with which the Supervisors contract, and to watch over the welfare of children placed in free private homes scattered throughout the State. The entire cost of operating our city offices was more than returned to the city treasury in the one item of money collected through this office from the "reimbursing insane." The amount received from this source and turned over to the Comptroller in 1913 will be $18,209.91, an increase of $2,227.95 as compared with 1912.

The Supervisors expended during the year 1913, $535,161.34, as compared with $542,542.27 in 1912. Detailed reports of the work at Bay View Asylum and the other activities of the Department accompany this report. The following table shows the amounts appropriated by the Mayor and City Council for the use of this Board.

1913.	Appropriation.	Expended.	Unexpended.
Bay View, salaries	$67,118 00	$61,480 73	$5,637 27
Bay View, expenses	155,589 00	155,589 00	....
Bay View, Improvements—			
Main building	29,000 00	29,000 00	....
Cow barn	12,500 00	12,500 00	....
T. B. bungalow	3,500 00	3,500 00	....
City office, salaries	8,860 00	8,720 00	140 00
City office, expenses	1,600 00	1,597 89	2 11
Hospitals	75,379 00	69,672 46	5,706 54
Insane	171,500 00	159,837 03	11,662 97
Temporary care of homeless men.	2,000 00	1,990 00	10 00
Transportation	1,000 00	510 73	489 27
Dispensary	10,500 00	10,250 13	249 87
Children	25,000 00	20,513 37	4,486 63
Totals	$563,546 00	$535,161 34	$28,384 66

Amount expended			$535,161 34
Amounts paid to city:			
Bay View, sale of old material	$156 13		
Bay View, board of inmates	541 90		
		$698 03	
Reimbursing through city offices:			
For care of insane	$18,209 91		
For care of children	135 00		
		18,344 91	
			19,042 94
Net cost of all departments			$516,118 40

Respectfully submitted,

J. Hall Pleasants, M. D., *President*,
Mrs. Daniel Miller,
John Black,
Cary B. Gamble, Jr., M. D.,
Anton G. Rytina, M. D.,
Elisha H. Perkins,
David Streett, M. D.,
James R. Wheeler,
J. Whitridge Williams, M. D.

REPORT OF BAY VIEW ASYLUM

BAY VIEW ASYLUM, January 30, 1914.

To the Supervisors of City Charities:

GENTLEMEN: I have the pleasure of handing you herewith the annual report of Bay View for the fiscal year ending December 31, 1913:

POPULATION.

The total number of inmates in the institution, including all departments, on the morning of January 1, 1913, was 1,551 (761 white males, 303 white females, 237 colored males, and 250 colored females). The total admissions during the year was 2,158, and eight were born in the institution, making a total of 2,166 (white males, 1,262; white females, 329; colored males, 377; colored females, 198). Of these admissions, 248 were readmissions and 197 were persons who were in the institution at the beginning of the year and who were discharged and readmitted during the year. The actual number of individual persons cared for was 3,124.

The number remaining at the close of the day, December 31, 1913, was 1,585 (779 white males, 315 white females, 244 colored males, and 247 colored females), an increase of 34 as compared with the same day in 1912.

The daily average number of inmates during the year was 1,478 as compared with 1,488 for the year 1912, a decrease of 10.

The highest number present at one time was 1,641 on February 16, and the lowest, 1,354 on October 7.

The total number remaining in each department at the close of the day, December 31, 1913, as compared with the same time in 1912, was as follows:

	1913.	*1912.*	*Increase.*	*Decrease.*
Insane	399	341	58	....
Tuberculosis Hospital	143	157	....	14
General Hospital—				
Ward "A"	128	128	....	....
Male chronic	18	16	2	....
Female chronic	18	16	2	....
Infirmary	870	893	....	14
	1,585	1,551	62	28
	1,551	.....	28	....
Net increase	34	.....	34	....

DEATHS.

The total deaths for the year was 628 (257 white males, 107 white females, 155 colored males, 109 colored females), an increase of 41 as compared with the year 1912. The deaths from tuberculosis were 289, or 46 per cent. of the total deaths. Two hundred and sixty-three, or .418 per cent. of the total deaths were colored, an increase of 27, as compared with 1912.

The average age of the white males who died was 52½ years.

The average age of the white females who died was 52⅓ years.

The average age of the colored males who died was 44½ years.

The average age of the colored females who died was 49 7-12 years.

The average age of those who died of tuberculosis was 40¾ years.

The average age of those who died, exclusive of the tuberculosis cases, was 57⅚ years.

The average age of the total who died was 50 years.

Four hundred and thirty-seven bodies were claimed by friends, 71 by St. Vincent de Paul's Society, and 120 unclaimed were turned over to the Anatomical Board.

COMMITMENTS BY POLICE MAGISTRATES.

The total commitments by the police magistrates during the year was 215 (134 white males, 27 white females, 47 colored males, 7 colored females), a decrease of 49 as compared with the year 1912.

Some of these commitments were persons arrested for being drunk. In one case, a man with an income of $500 per annum ($360 of this amount a soldier's pension), was committed for a period of three months. He was 76 years old, but fairly able-bodied. He was discharged on writ of habeas corpus. As Bay View is neither a penal institution nor a reformatory, it is better for the reputation of the place that as few commitments be made as possible. All persons should be examined by a physician before commitment, and if found to be a case for our care, an admit can be obtained from our admit clerk, or if the admit cannot be obtained, the commitment should be made for one or two weeks, so that the party committed can be discharged as soon as able to go out.

FINANCIAL.

The amount appropriated for the support and improvement of Bay View by the Board of Estimates for the year 1913 was as follows:

For salaries	$67,118 00
For expenses	155,589 00
For new improvements	45,000 00
Special from Contingent Fund for completion of bungalow,	1,624 70
Unexpended balances brought forward from 1912	61,064 82
Total available	$330,396 52

Out of this amount was expended:

For salaries	$61,273 23	
For expenses	155,589 00	
For new improvements	84,542 05	
Unexpended salaries remaining in city treasury	5,844 77	
Unexpended improvement appropriation carried forward to 1914	23,147 47	
		330,396 52

Five hundred and forty-one dollars and ninety cents for board of inmates in hospital and infirmary, and $156.13 for sales of old material, was collected and paid to the City Comptroller; $1,110.56 for board of insane was collected by the Secretary of your Board and paid to the City Comptroller. These amounts have been deducted from our expenditures in arriving at the net cost of maintenance.

The per capita cost of maintenance in each department was $147.53 for insane, $222.53 for Tuberculosis Hospital, $228.02 for General Hospital, and $102.78 for Infirmary. The average of the total of all departments was $146.93.

The per capita cost of feeding in each department was $44.32 for insane, $88.90 for Tuberculosis Hospital, $74.28 for General Hospital, $37.01 for Infirmary, and the average for the whole population was $49.80, or 13 7-10 cents per day for each person.

The cost of provisions considerably increased during the year; at one time the cost of beef and bacon was 40 per cent. more than in 1912

MEDICAL BOARD.

The regular meetings of the Medical Board have been held monthly, and special meetings when the interests of the institution required them. The attendance throughout the year was good.

City Detention Hospital for the Insane.

Dr. Ralph P. Truitt, who was the physician-in-chief at the beginning of the year, resigned on May 1, and was succeeded by Dr. Kenneth B. Jones on June 1. He has as assistants, one resident physician and one interne.

The total number of inmates in this department at the close of the day, December 31, 1913, was 399, as compared with 341 the same date in 1912; an increase of 58.

The daily average number of inmates for the year was 384, a decrease of 11 as compared with the year 1912.

The admissions during the year amounted to 360. The deaths were 88 and discharges 214; 94 of the latter were transferred to State hospitals and Mount Hope.

The highest number present on any one day was 415, on August 12, and the lowest 341, January 1 and 3.

The white and colored wards are both overcrowded.

Through the efforts of the President of the Board, a special appropriation was obtained from the Board of Estimates, which was used for the purchase of additional furniture, etc., and the wards are now in better condition than they have ever been.

Those of the patients able to work have been given employment of some kind. The women's sewing-room turned out 4,600 pieces of various kinds of clothing, etc. An appropriation has been secured this year for a sewing teacher, and it is hoped better results will be obtained. Moving-picture shows were given through the winter months and music in the yards every two weeks during the summer.

The laymen of the Episcopal Church hold service two Sunday mornings a month.

Tuberculosis Hospital.

This department, under the charge of Dr. Gordon Wilson with one resident physician and four internes (an increase of two during the year), has kept up its good work.

The total number of patients at the close of the day, December 31, 1913, was 143, a decrease of 14 as compared with the same day in 1912. This decrease is due to the opening of new wards at the State Hospital at Sabillasville, Md., for the more advanced cases.

The daily average number of patients for the year was 152, a decrease of five as compared with the year 1912.

We have to thank the Sunshine Society for their generous gift of steamer chairs and blankets, which have added much to the comfort of the patients. The St. Vincent de Paul Society has also been very kind in distributing fruits, candy, tobacco, etc., every Sunday.

A bungalow for the doctors has been built and is now occupied. It is situated nearer the hospital than their old quarters, and is much more convenient for them.

GENERAL HOSPITAL.

This department remains under the direct charge of Dr. Thomas R. Boggs, physician-in-chief, and Dr. Arthur M. Shipley, surgeon-in-chief, with a resident staff of one physician, one surgeon and eight internes.

The number of patients remaining at the close of the day December 31, 1913, was 218, three more than the same day in 1912.

The daily average for the year was 224, an increase of four over 1912.

The nursing staff has been fairly well maintained, but owing to the appropriation for the pay of orderlies being less than we can get them for, we have to depend entirely on inmate labor for this kind of work, which is very inefficient.

The male and female chronic wards are overcrowded, and additional accommodations must be provided for these cases at an early day.

INFIRMARY.

The total number of inmates in the Infirmary (exclusive of those requiring hospital treatment and who are included in the hospital average) at the close of the day, December 31, 1913, was 825 as compared with 838 the same day in 1912; a decrease of 13.

The daily average number of inmates for the year was 718, three more than in 1912.

The new service building, erected in rear of the Infirmary, was opened August 1. The dining-rooms in this building are a great improvement over the old ones, which are now converted into dormitories, and relieves the congestion we have had for several years.

FARM.

The Board of Estimates, in making up our budget for 1913, cut out two farm hands we had been employing for several years. When it is considered that these hands have been used for other work besides farming, such as keeping up the roads, hauling ashes, grading and keeping the grounds in condition, it will be understood the serious inconvenience and loss it has been to the institution, and rendered it impossible to keep the grounds in the condition they should be. Notwithstanding the loss of this help, the produce raised, including milk at a fair valuation, shows an estimated profit of $2,340.65. These profits would have been considerably increased had it not been that cholera broke out among our hogs and prevented our killing the number we expected

One thousand eight hundred and seventy-eight gallon-cans of tomatoes were put up by our own labor for winter use.

A modern cow barn has been erected, but will not be occupied until the coming spring.

IMPROVEMENTS.

The new service building which was in course of erection at the beginning of the year has been completed. It contains dining-rooms for the Infirmary inmates, a modern kitchen, bakery, ice-plant, cold storage and general storeroom. The kitchen and bakery have all the modern conveniences for work in each department, and in equipment is superior to any institution in the State.

A modern cow barn has been erected with stabling accommodations for 50 cows.

The main building has been equipped with a sprinkling system, fire doors put in the hallways and additional stand-pipes put in all the buildings, with exception of Ward A.

A number of minor improvements have been made by our own labor, such as underground drainage for down-spouts on new service building, grounds in rear of main building, down-spouts on bungalow and nurses' home, laying water mains to cow barn, cement pavement in rear of service building, etc.

GENERAL.

Church services are held at regular intervals by different denominations and laymen who have been so faithful for many years.

A number of entertainments have been given by kind friends and a frequent distribution of fruits, candy, etc., made to the inmates by persons who have devoted their time in looking after the welfare and happiness of the poor unfortunates under our care.

With thanks to the Board for their confidence and many courtesies extended me,

Respectfully submitted,

LAMAR HOLLYDAY,
Superintendent.

BAY VIEW HOSPITAL

BAY VIEW HOSPITAL, December 31, 1913.

To the Supervisors of City Charities:

GENTLEMEN: In accordance with the precedent of former years, we beg to submit our report of the work in the General Hospital for the year 1913, with comments on the progress and the needs of the institution at Bay View as we can see them.

GENERAL HOSPITAL.

The work in the General Hospital has been conducted with enthusiasm and success, as far as the activities of the medical and nursing staff are concerned.

The building, as has been mentioned in our previous reports, is a frequent source of trouble and at times of severe distress to us. The prime defect is in the heating apparatus, which is absolutely inefficient for anything but very mild weather. In the average winter, and without any extraordinary wind, the temperature of our west wards will be about 50 to 55 degrees as a maximum. Though this past two months has been mild we have already had freezing temperature in the wards, on one day as low as 28 degrees Fahrenheit. This is absolutely wrong and jeopardizes the life of our sick people. Contributing largely to this trouble is the very unsatisfactory character of the windows and ventilators, which are poorly constructed and leaky. We earnestly ask your attention to this trouble; it is one which would lead to serious criticism if it were generally known.

Again, we beg to call your attention to the necessity of some relief from the plague of flies. There is every demonstration that the epidemic of typhoid during the fall just past was due to fly-borne infection. The epidemic entailed a morbidity of 22 cases, with a death list of eight, and six left now in the hospital. That the disease did not reach a more serious degree was due to the prompt vaccination of the insane wards and almshouse districts involved. In this connection we should like to express our appreciation of the co-operation of the Health Department in furnishing the vaccine, and of the administrative officers in enforcing the obedience to orders. In our opinion, unless the breeding places of the flies are chemically treated or screened, or both, we can look for little relief from this great danger to the health of our personnel and patients.

We have heretofore requested that the sitting-room in the hospital be furnished with the necessary lights and shelves for the comfort of the officers and the easy access to the Reference Library.

A number of donations to the Medical Library have been made by physicians in the city.

The electric installation in the walls of our building is still imperfect, and does not permit of the safe use of electric hand apparatus. It would be a great saving in time and labor to the doctors and nurses if this could be corrected.

The need of an adequate X-ray outfit becomes more and more pressing each year. The only use we can make of this important diagnostic aid at present is such as we ge through the courtesy of the Johns Hopkins Hospital.

The provision that a small contingent fund to replace the broken and purchase some new instruments for the operating room and laboratory is earnestly requested. If we could have $200 for this purpose it would facilitate our work greatly.

We should also like to call the attention of the Board to our previous communication (in 1912) touching the purchase of a certain number of new beds and mattresses to replace the old—this is very urgent; and the use of a better grade of rubber sheeting to save the loss in mattresses.

Since our last report, the handling of the tuberculosis problem has been greatly improved, and we now have relatively little loading of our wards with infectious cases of this kind.

The labor question has been improved somewhat by the increase allowed us last summer, but it still looms up as the big problem in the running of the hospital. The city must be taught to face the certainty that we cannot run a modern institution with derelict almshouse labor.

The laundry continues to be overburdened and inefficient. There is no adequate accounting system for the linen and there is consequent confusion and loss, as well as great shortage of clean supplies.

CHRONIC HOSPITAL.

The situation in the chronic hospital has become very acute and urgently needs the attention of the Supervisors. The number of more or less helpless patients who need some nursing and cleaning is on the increase, our chronic wards are full, and the general hospital is handicapped with a number of these persons who take up room and time and who are not really candidates for medical treatment We earnestly recommend that the provision for these cases be increased, and that as early as possible.

DISPENSARY.

The detailed report on this subject has long been in your hands and has been favorably considered by the Board, but all action has stopped at this point. Let us remind you that in this past year 11,000 cases have been treated in the medical dispensary, and 4,600 cases in the surgical dispensary, and we are sure that if your Board could see the place in which this work is required to be done they would agree with us that it is wholly inadequate and entails an unreasonable burden upon the medical and nursing staff.

May we again call your attention to the extremely inadequate telephone service, both internal and external. There is but one wire to serve the needs of the almshouse and three hospitals, with a total population in the neighborhood of 1,500. We should have a switchboard and a competent operator.

We would especially like to commend the satisfactory administration of the pharmacy. It has been a year entirely free from the difficulties and errors that were so common up to appointment of the present incumbent. We urge, on her behalf, that the proposed improvement of the drug room be undertaken as soon as possible, and especially that she be supplied with the services of a scrub woman for one half day three times a week.

The resident staff have been most satisfactory and enthusiastic in their work. In the three years we have been working on the new basis, there has never been any disturbance or scandal or bad behavior on the part of our staff; in fact the tone of the men is comparable in every respect to the best in the country. In this connection we should like to call your attention to the unsatisfactory state of the officers' dining-room. A most disagreeable sink is still maintained in the room, and cooking and service of the food is very poor. This is true also of the nurses' dining-room. We are convinced that if the good quality of food which is purchased for these tables were properly cooked and served, we should have no complaint whatever from our staff, but unless someone takes an active interest in this feature, good food is wasted and good people made unhappy.

ALMSHOUSE AND PREMISES.

It is unnecessary for us to repeat the recommendations we made last year, as they are still applicable to the present situation. We should like to mention, however, the need for sterile water and paper drinking cups in the almshouse, and the great necessity of removal of the open privies in the yards.

Department of Pathology.

The growth of this department under the new arrangement has been the most pleasing and satisfactory feature of the year's work. The staff is enthusiastic about the work and the improvement in their training, and that of the students attending the demonstrations can hardly be overestimated.

Commitment of Unfit Persons.

The Superintendent will doubtless call your attention to the practice of the city magistrates in committing able-bodied vagrants and drunken persons. This is a great hardship to us from the standpoint of administration and discipline. Our attendants are in no way fit to cope with violent drunken persons, and several of them have been injured in attempting to take care of these people. We are not a penal institution, and the law specifically protects us from this sort of abuse. We should urge that magistrates have a medical examination of persons claiming the almshouse privilege, instead of being sent to the Jail or the reformatory.

Respectfully submitted,

Thomas R. Boggs,
Physician-in-Chief.

Arthur M. Shipley,
Surgeon-in-Chief.

ANNUAL REPORT OF THE PATHOLOGICAL DEPARTMENT OF THE CITY HOSPITAL

BALTIMORE, December 31, 1913.

To the Board of Supervisors of City Charities:

The Pathological Service of the City Hospital was reorganized in January, 1913, as follows:

Internes from the different services were delegated as assistants in pathology and served variable periods of time, according to the number of internes on each service. Each of those from the medical service were pathological assistants for three months, and each of those from the surgical service four months. The autopsies from the tuberculosis clinic were likewise performed by the resident staff, but here the major part of the work was undertaken by the resident-in-chief. The autopsies from the almshouse and the insane department were performed by one of the assistants from the above three services.

The duty of these assistants was to perform the autopsies on the cases dying on their respective services, to write complete protocols of their post-mortem examinations and to prepare microscopic sections of the important lesions of each case from the tissue preserved at the time the autopsy was performed.

The pathologist-in-chief visited the City Hospital two or three times a week. It was his duty to examine the tissues and organs of every autopsy; to demonstarate the lesions, particularly to the pathological assistants; to correct the protocols; write the anatomical diagnoses and the microscopic notes. During one of the visits each week a conference was held with the physician-in-chief and the entire clinical staff; and, at this time, the clinical and pathological findings of the cases were compared. At a second visit each week consultation was held with the surgeon-in-chief and the anatomical material was demonstrated to the students of one of the medical schools of the city, usually the University of Maryland.

The protocols of the autopsies performed at the City Hospital during the past year, after being carefully corrected and supplemented by a brief synopsis of the clinical history, have been typewritten and bound. Tissues of all the important organs and lesions of each case were removed at the time of autopsy and have been preserved in formalin in individual jars—one jar for each autopsy. Sections were taken from these jars for immediate microscopic study. The jars were then carefully labelled and filed. The sections from each case were similarly preserved.

Of the autopsies performed during the year 1913, fifty-six were done in the first six months and ninety-seven the second six months, making a total of one hundred and fifty-three. This number shows a decided increase over the number for the preceding five years, as may be seen from the following table:

	Autopsies.
1908	84
1909	75
1910	88
1911	92
1912	72
1913	153

The total number of deaths occurring in the institution during the year was six hundred and thirty-one; therefore, the percentage of autopsies was twenty-four. It must be remembered, however, that a considerable number of bodies are claimed by the Anatomical Board and in the vast majority of these no autopsy is permitted. During the current year this board received one hundred and twenty-one bodies. They allowed a post-mortem examination on five, or four and one-tenth per cent.; and did not allow such examination on one hundred and sixteen, or ninety-five and nine-tenths per cent. If these one hundred and sixteen cases be subtracted from the total number of six hundred and thirty-one the percentage of autopsies will be increased to twenty-nine per cent.

The one hundred and fifty-three autopsies were divided among the various services as follows:

Service.	No. of Deaths.	No. of Autopsies.	Per Cent. of Autopsies.
Medical—			
Ward A	158	57	36.0
Almshouse	69	32	46.0
Chronic hospital			
Annex			
Total	227	89	39.0
Surgical	55	19	34.0
Phthisical	261	42	16.0
Insane	88	3	3.4

With the increase in the number of autopsies and the establishment of a system which will furnish the hospital with complete gross and histo-pathological records the needs of the Department have grown.

It would be desirable to have a salaried resident pathologist who could assist the internes serving on the pathological staff and who could utilize the splendid material for demonstration to more students from the various medical schools of the city. He could also carefully investigate the more complicated conditions which arise in the post-mortem work, for which more time is necessary that the internes, who are simultaneously carrying on their clinical work, can afford.

Further, it would be very desirable to have a technical assistant, so that the histo-pathological material could be more promptly and thoroughly investigated.

The great interest which the various departments have taken in the establishment of this new development of the Pathological Department has been extremely gratifying.

It is hoped that the progress of the Pathological Department shown in the past year will be continued in 1914.

Respectfully submitted,

M. C. Winternitz,
Pathologist-in-Chief.

CITY DETENTION HOSPITAL FOR THE INSANE

CITY DETENTION HOSPITAL, December 31, 1913.

To the Board of Supervisors of City Charities:

GENTLEMEN—In compliance with a request from your secretary, I respectfully submit the report of the City Detention Hospital for the Insane for the year ending December 31, 1913.

In studying the statistics, it is seen that there was at the beginning of the year a population of three hundred and forty-one, and that during the year there were admitted three hundred and sixty patients, making a total under treatment of seven hundred and one. The large increase of admissions is, of course, striking—there being seventy more admissions than during the year immediately preceding, or an increase of 24 per cent.; our admission list being, I believe, the largest of any institution for insane in the State. There were paroled and discharged during the year a total of one hundred and thirteen patients, as against ninety-three the previous year, or an increase of 21 per cent. Of this number seven were deported and eleven sent to their legal residences outside of the State. During the year, one hundred and thirty-five white patients were transferred to the State hospitals and nine to Mt. Hope. The State Hospital for the Colored Insane has not relieved us of any of our negro population. Of those discharged or transferred during the year, sixty-one were considered recovered, an increase of forty-two over previous year; eighty-eight were considered improved, an increase of eighteen; and ninety-one, an increase of fifty-three, were considered unimproved. There were, during the year, eighty-eight deaths, an increase of twenty-two, or 33 per cent. over previous year. But in 1912, based on admissions, 23 per cent. died; while this year there was 24 per cent. Of those dying during 1913, forty-six, or 52 per cent., were from two causes—senility and general paralysis. Of those dying, twenty-three, or 26 per cent., were in the hospital less than one month; it not being an unusual occurrence for patients to be admitted in a moribund condition. There were remaining in the hospital at the end of the year three hundred and ninety-nine patients, an increase for the year of fifty-eight. Of those remaining, two hundred and forty-four, or 61 per cent., are negroes. This large percentage being due, of course, to the fact that no negroes were transferred to the State hospitals.

During the latter half of the year covered by this report there has been made the first very fruitful effort at improving the interior aspect of the naturally gloomy buildings of the Insane Department at Bay View—the writer having had the good fortune to have had the use of a certain fund to purchase considerable furniture and other material, which has been used almost exclusively for the furnishing of the wards, the physicians' office and nurses' rooms.

Previous to this, there had been little interest shown—outside of the various physicians-in-chief who have been here—in the improvement of the housing conditions in this Department, which for a long time have been notoriously bad. It had generally been the opinion that little could be done and, in consequence, little was attempted. People generally seem forgetful of the fact that this Department receives the largest percentage of recoverable cases of any department at Bay View, and it is certainly the department where improvements in the general appearance will have the most value in the effect such things have on the condition of those admitted.

The hospital now has none of the old unsightly benches which formerly constituted practically the sole furnishings over all the wards. In place of these we now have mostly mission furniture of attractive and substantial variety. There are settees, rocking chairs and straight chairs sufficient for the accommodation of all the patients. Springs, mattresses and feather pillows have been provided for a much larger number of beds. Many rugs have been placed on the halls, in the sitting rooms and dormitories; pictures and attractive clocks are on all the wards; a heavy linoleum covers the entire length of both halls in the men's building and the floors on all the wards are oiled and polished, as well as the rough surfaces will permit. The furniture for the nurses' rooms and the physicians' office is a very great improvement. The painting of the wards in the entire Department also adds greatly to the general appearance.

The medical work here is greatly handicapped. The population is in three buildings, which are widely separated and poorly equipped for their purpose. Our laboratory is most inconveniently situated and poorly equipped. The staff is entirely too small and too poorly paid. With the very large number of admissions here, and the fact that practically all are acute cases—most of them ill physically, as well as mentally—and with a resident population of four hundred, many of whom require constant attention, one can readily understand the amount of work there is to be done. These facts practically preclude the possibility of our working in any particular field, as our time is wholly taken up with routine mental and physical examinations, with but little time for any particular case. It is certainly to be regretted that a large portion of the clinical material here has to be passed over insufficiently investigated. But I feel that this cannot be remedied with the present restrictions under which we labor, especially with reference to the laboratory feature of the work. We simply don't have the time.

During the latter part of August there began a typhoid outbreak in this Department, during which nine patients and three attendants were affected with the disease. Two of the patients died of the disease. At this time the entire population of this Department was innoculated with typhoid vaccine, which procedure effectually prevented further infection. The outbreak was confined entirely to the male building, and it seemed most conclusive that the infection was air or fly borne and that the source was from an unsanitary, unscreened surface privy which was in close proximity to the dining-rooms. Two facts seem evident: First, that the dining-rooms at least should be screened; and, second, that the surface privies should be abolished. The effectiveness of typhoid vaccine as a prophylactic agent also seemed very clearly demonstrated.

In the field of occupation and amusement little improvement is noted. It should be mentioned, though, that nearly all of the better class of white patients are transferred to State hospitals, leaving us with a class composed largely of seniles, paretics and the like, all of whom are almost totally incapable of any employment. Among the men, both white and colored, the percentage of employed (about 60 per cent.) will compare favorably with other institutions. This Department provides coal passers, farm workers and a grading gang for Bay View, and a large part of the common laboring work around the institution is done by its inmates. From the women we provide the largest part of the help for the laundry, do all our own mending and have a sewing-room, where all the clothes for the women and all the underclothes for the men are made. The greatest problem is among the negro women. Here we have one hundred and thirty women of every sort crowded together on two wards, a fact alone which renders discipline impossible. This also is the class where no suitable employment is provided, for which no funds are provided and with little hope of early State care. The whole question of occupation certainly merits some consideration from those in authority.

The following would seem to me to be some of the many things where great improvement is to be looked for and of which this Department seems most in need:

First—The development of some comprehensive scheme for the housing and proper care of the constantly-increasing number of insane coming from Baltimore city, since it seems evident that total State care of Baltimore's insane can hardly be hoped for.

Second—A better paid and a larger medical staff for this Department, so that the institution could attract men of longer experience and better training than probably the majority of us who have been here have had; and, probably more than anything else, a raise in salary would certainly prevent the all too frequent changes that constantly occur on the staff.

Third—Some arrangement whereby an ambulance service, with competent nurses, can be provided for the early and direct transmission of mental cases from the home to hospitals, and thereby obviate the present system of taking the patient first to the police station, where he is locked up and mistreated, because misunderstood, and then at the convenience of the police authorities brought in the police patrol to the hospital. I might mention that this is the procedure in at least eighty per cent. of the patients admitted here. The profound impression made on patients by this procedure is evident when I tell you that a large number of the patients believe firmly, and so state, that they are sent here to be punished and not for the purpose of effecting a possible cure.

Fourth—That these large, unwieldy wards, where all classes, from idiots up, are compelled to intermingle, and where discipline is impossible, be divided into smaller wards, where a feeble attempt at classification may be made. The only possible classification now is white and colored male and female, a problem which is in itself usually not very diffcult. With this there should surely be some effort made at replacing the unsightly toilets and bathrooms in the female building by something passably hygenic and efficient. The construction of a diet kitchen, where suitable food for sick patients may be prepared, as is provided in all the other departments, is also greatly needed.

Fifth—The employment of at least one field worker, whose salary would more than be equalled by the money saved through the frequency with which employment might be found for patients, or home conditions or surroundings may be so regulated as to permit a patient living outside of the institution.

In conclusion, I wish to express my deep debt to all who are actively interested or are even in sympathy with what we are trying to do. I feel greatly indebted to my assistants on the medical staff—Dr. Eichelberger and Dr. Goldsmith. Especially am I grateful to the Superintendent of Nurses, the Male Supervisor and his assistant and to all the nurses and attendants for their uniform courtesy and consideration. The staff of the General Hospital at Bay View has also been of great assistance by willingly taking care of several of our typhoid patients and especially by carrying out the Wasserman reaction on all blood sera and spinal fluids submitted by this Department.

To Dr. Henry J. Berkley I feel most grateful. His weekly visits to the institution bespeak his interest in the hospital and afford the resident staff the only means by which they may have expert advice on the mental status of cases under treatment. Dr. W. B. Cornell, secretary of the Maryland Society for Mental Hygiene, has shown us many courtesies and has aided us very much by his interest in the place and by securing information about, and employment for, several patients for whom we have asked his consideration.

Most respectfully yours,

KENNETH B. JONES,
Physician-in-Chief.

REPORT OF THE PHYSICIAN IN CHARGE OF THE MUNICIPAL TUBERCULOSIS HOSPITAL

BALTIMORE, December 31, 1913.

To the Supervisors of City Charities:

GENTLEMEN—I beg leave to submit herewith the report on the Municipal Tuberculosis Hospital for the year ending December 31, 1913. During the past year there has been treated in the Hospital, for varying periods, a total of six hundred and sixty-five patients—a decrease of fourteen as compared with 1912. Of these six hundred and sixty-five patients, two hundred and sixty-one were discharged, two hundred and sixty-one died, and there were one hundred and forty-three patients in the hospital on December 31.

DEATHS.

During the past year, the number of deaths increased forty-seven, as compared with the year previous, and our mortality increased to 39.2 per cent. This increase in mortality and decrease in number of patients treated was undoubtedly due to the fact that the State Sanatorium—a 200-bed hospital for "advanced" cases—opened in October, 1912, with a result that during 1913 the more hopeful and earlier cases went to the State Sanatorium, which class we had in the past treated, as there were practically no accommodations for them elsewhere. The increased number of beds for "advanced" cases, due to the opening of the State Sanatorium, has resulted, temporarily at least, in doing away with a waiting list; as a patient can now be admitted immediately to the Municipal Tuberculosis Hospital; and, as a result of it, during the past year the patients who have sought admission have, in many cases, been practically moribund, as shown by the fact that sixty-one of the patients who died were in the hospital less than ten days, and an additional sixty-four were in the hospital less than one month.

DISCHARGES.

The number discharged in 1913 was two hundred and sixty-one, as compared with three hundred and eight in 1912. Among those discharged, one hundred and five gained an average of nine pounds in weight, with a maximum gain in one case of forty-three pounds; fifty-six lost an average of six pounds, and there were seventy-two of whom there is no record of gain or loss, due to the fact that they were in the hospital less than one month. Of those discharged, twelve had the disease apparently "arrested," one hundred and six were improved, while one hundred and thirty-three were unimproved. The cost of running the hospital, including all expenses, save the interest on the investment, was, during 1913, a trifle under sixty-one cents.

Our low cost is, in a great measure, due to the running of the hospital in conjunction with a large general hospital, almshouse and hospital for the insane, thereby decreasing our administration cost to a minimum, and saving by the use of unpaid labor, where possible, from the almshouse and the hospital for the insane. The cost per capita per day for the years 1909 to 1913, inclusive, was forty-nine cents, fifty-three cents, fifty cents, fifty-four cents and sixty-one cents. As the per capita cost per day in all hospitals in the United States devoted to the treatment of patients suffering with advanced tuberculosis of the lungs is on an average well above a dollar a day, it can well be seen that our cost is too remarkably low; and if, in the future, the work is to increase and improve to a proper standard, the cost must increase greatly, even with the advantages that we possess.

During 1913 there was built at a distance of one hundred and fifty feet from the hospital a bungalow for the use of the resident physicians, thus enabling them to be in close proximity to the hospital, and, on that account, better able to attend to their duties to an advantage, not only to themselves, but especially to the patients. There was given to the patients at Christmas time six dozen canvas reclining chairs and blankets by a small group of charitable workers known as the "Fidelis Circle," and this gift was of especial value, as the patients heretofore had only wooden benches to sit on when taking the "outdoor open-air" treatment.

The breadth of the medical work in the Municipal Tuberculosis Hospital can be well shown by the following non-tubercular diseases which were among the complications of the tuberculosis for which the patients were treated at the hospital: Valvular lesions of the left side of the heart, myocarditis, acute endocarditis, chronic parenchymatous and interstitial nephritis, uræmia, asthma, myxodema, aneurism of the aorta, syphilis, leukemia, typhoid fever, Raynaud's disease, cholecystitis, appedicitis, locomotor ataxia, malignant tumors and two obstetrical cases. Of course, there were the usual tubercular complications of other organs than the lungs. Complete autopsies were performed in forty-two instances.

Statistical Tables.

I have appended six statistical tables—five of them dealing with the deaths and discharges for each of the years from 1909 to 1913, inclusive. A study of them will show matters of interest, and also will aid in directing the future necessary improvements. The sixth and last table shows the deaths from tuberculosis in Baltimore by color and sex, and also the deaths by color and sex at the Municipal Tuberculosis Hospital for each of the five years from 1909 to 1913, inclusive; and also the deaths of Baltimoreans at other tuberculosis sanatoria in Maryland. You will notice that during this period the percentage of adult Baltimoreans dying of tuberculosis, who died in special tuberculosis hospitals, increased from 16.8 per cent. to 26.8 per cent., and I have no doubt that this increase in the segregation of the dying consumptives will in the future play a large part, not only in decreasing the mortality of the disease, but also the morbidity.

RECOMMENDATIONS.

The steadily-increasing number of moribund patients admitted to the hospital requires increased facilities for proper nursing, and as most of these patients are men, there is need of good orderlies. Heretofore, we have been allowed fifteen dollars a month for each orderly, and during 1914 we have been allowed twenty dollars, which is from ten to twenty dollars less a month than is paid by other hospitals in the city. Such salaries can attract only inferior men, who will be unsatisfactory and who, consequently, will not remain. On that account, I most urgently recommend that the present salaries be markedly increased.

We have at present a sufficient number of graduate and undergraduate trained nurses, but we badly need a supervising night nurse, such as they have at the general hospital. She should be a trained nurse of broad experience; and, to obtain a satisfactory nurse to fill this arduous position, requiring continuous duty at night, it is necessary to pay a somewhat larger salary that is paid to the graduate ward nurses now employed. I would, therefore, recommend that the position of night supervising nurse be created, and that the salary should be fifty dollars a month, which is ten dollars more a month than is now paid to our graduate ward nurses.

The need of a dish-washing machine becomes steadily more necessary, owing to the growing difficulty of getting labor from the almshouse, as one man can do the work with a machine which is now done by many. The fact that a dish-washing machine would sterilize the dishes used by the patients is in itself one of the strongest arguments for its need in a hospital devoted to the treatment of a *communicable disease*.

I would again call attention to the urgent need of individual lockers for patients' clothes, which they at present keep exposed on the shelf of their bedside table or on hooks in the ante-room to the dining-room.

The appearance of the floors of the hospital is, to say the least, unsightly, owing to their constant cleaning with carbolic acid solution; and, what is more important, they are unsanitary. I would recommend that the floors be covered with some non-absorbent substance, such as is used in modern railway waiting-rooms, which can be mopped frequently and kept clean with a minimum of labor. The scraping and waxing of the floors, in my judgment, would be unsatisfactory, as it requires a great deal of rather hard manual labor to keep such floors in proper condition; and, while we have many patients who are capable of using a light mop on a floor without detriment to themselves, we have practically none who can use the heavy stone polishers necessary for waxed floors.

As our kitchen is situated some little distance from the hospital and on a different level from the dining-room, the food containers must be carried by hand through the open air, thus exposing not only the food, but the waiters, to bad weather conditions at times. On account of the above, I would recommend that the present areaway at the east end of the hospital be extended to the kitchen building and roofed over, so that a truck may be used for taking the food directly from the kitchen to the dining-room and thereby decreasing the number of men needed, and it would also do away with the exposure of the food and the employee to weather conditions.

Frequently during the past year we have had a shortage of bed linen, owing to the fact that in order to dry our linen we must hang it outdoors, or else send it to the general laundry, which is incapable of handling it promptly. As this has been a matter of written complaint by one patient, and recognized as a justified complaint by those in authority at the hospital, I would strongly urge that the room formerly used in the present laundry building as a morgue be converted into a drying rom for laundered clothes.

Two rolling stretchers are badly needed for the conveying of "bed patients," as we have none at present and must depend upon wheel chairs, which is not only unsatisfactory, but at times definitely dangerous to the patients. A third rolling stretcher should be obtained for conveying the dead bodies from the hospital to the morgue.

The porches on the west side of the hospital are at present the only ones not screened and I would recommend that they be screened, also that the sleeping porch of the doctors' bungalow be screened.

Last year none of the entrants for the competitive examinations applied for positions in the tubercuolsis hospital. Although positions were offered to those who failed to get appointments in the general hospital, none accepted, and it was only by great effort and personal solicitation of former students that three assistant resident physicians were obtained. The condition last year was not exceptional, and I believe that for many years to come there will be great difficulty in obtaining doctors to act as internes in a tuberculosis hospital, as they feel that the experience they gain is in too narrow a field; and, in addition, there is a distinct, though in my opinion unfounded, fear that the work is dangerous. In order to get internes extra facilities must be offered to induce them to do this work, and I would recommend that a first-class X-ray plant be installed in the tuberculosis hospital, so that each case could be studied with a fluroscope without danger, either to the patient or to the doctor, and undoubtedly this would be of benefit in the treatment of certain cases, such as those requiring artificial pneumothorax. The need of an X-ray plant has been dwelt upon in previous reports of the physician-in-chief and surgeon-in-chief of the general hospital, and I think that by establishing such a plant in the Municipal Tuberculosis Hospital their need would be, in a large measure, met, as the cases requiring X-ray pictures in the medical or surgical departments could be sent across to the tuberculosis hospital readily, and the two hospitals are only about two hundred yards distant from each other.

The above recommendations are urgent; and, on account of their urgency, I will not, at this time, recommend many minor things that would aid in the treatment and comfort of the patients, but I would suggest that you consider the question of providing additional accommodations for tubercular patients; and I would recommend that if a new hospital is constructed, it should be an exact duplicate of the present general hospital, so that in the future, should there be a decreased need in hospital beds for consumptives, it could be used as a general hospital in conjunction with the present unit.

I desire to take this opportunity of thanking my assistants—Dr. Callahan, resident physician; and Drs. Neistadt, Sparck and Wilkins, assistant resident physicians—for their most excellent work during the past year.

I also desire to thank Miss Smith and the nurses under her for their capable work in the care of the patients.

The active co-operation of the Health Department, and especially the nurses of the Tuberculosis Division, is acknowledged with thanks.

In addition to the tables appended to this report, I have added our usual diet list and a brief history and description of the hospital.

Respectfully,

GORDON WILSON, M. D.,
Physician-in-Charge.

HISTORY.

The Municipal Tuberculosis Hospital might be said to have been started in 1890, as in that year a separate ward was established in the Bay View Hospital for patients suffering with tuberculosis of the lungs. This was, I think, *the first attempt in this country to have a separate ward, in a general hospital, for tuberculosis patients on account of the knowledge of the fact that this disease is communicable.*

In 1903 the city appropriated $10,000 to build a hospital for consumptives on a plot of ground adjoining Bay View, and at a distance of a quarter of a mile from the main building. This hospital was opened on December 19, 1904, with forty-eight patients. Since then a separate kitchen building and laundry building have been erected, and there has been added a wing to the hospital. So far there has been expended about $60,000, which includes the new, deep, screened porches along the front of the building.

The hospital is a brick building a hundred and fifty feet long, two stories in height, with a basement whose floor is three feet below the level of the ground. The entrance is in the center of the south side, and extending from it the full length of each floor are porches, roofed and screened, on which are the beds of those who are sufficiently strong to sleep out in all sorts of weather. Extending back from the center of the north side is a T-shaped wing with deep covered porches on either side. In this wing are the isolating rooms for delirious or dying patients, doctors' and nurses' offices, laboratory, examining rooms and toilets, separate facilities being provided for each sex and color.

There are accommodations for 200 moderately and far advanced cases of pulmonary tuberculosis.

In addition to the buildings described above, there are two small buildings in close proximity to the main building, one of which is the nurses' home, and the other a home for the physicians.

The nurses' home is a two-story brick building, surrounded on three sides by broad, screened sleeping porches, and has accommodations for twelve undergraduate and four graduate nurses.

On the opposite side of the hospital from the nurses' home is the resident physicians' bungalow, a small one-story frame building with a broad sleeping porch, constructed during 1913, and capable of accommodating comfortably six physicians.

MUNICIPAL TUBERCULOSIS HOSPITAL, BALTIMORE, MD.

DAILY BILL OF FARE.

Breakfast, 6.30 A. M.—Oatmeal, hash or eggs, bread, butter, milk, coffee and tea. (Eggs to be served alternately in various styles.)

Morning Diet, 9 A. M.—Milk, 5 oz., and one raw egg.

Dinner, 11.30 A. M.—Beef on Monday, Tuesday, Wednesday, Thursday and Saturday; mutton on Friday; bacon on Sunday; two vegetables each day from the following list: potatoes, tomatoes, turnips, lima beans, cabbage, rice, navy beans, spinach, onions and hominy; bread, tea and coffee; chicken soup on Saturday, another soup once a week.

Afternoon Diet, 2 P. M.—Milk, 5 oz., and one raw egg.

Supper, 4.30 P. M. Bread, butter, coffee, milk, tea, molasses, crackers and cheese twice a week; stewed fruit when cheese is not furnished; corn bread on Fridays.

Night Diet, 8 P. M.—Milk and raw egg. (For "bed patients" only.) Soup every day for "bed patients"; beef tea, custard, roast potatoes, steaks, etc., when specially ordered by physician.

Hospital capacity is 100 beds and when "running full" 200 quarts of milk and forty dozen eggs are used daily.

THE CARE OF THE TUBERCULOUS POOR, WITH RECOMMENDATIONS.

At present the Supervisors have the following beds for tuberculosis patients:

1st—The Municipal Tuberculosis Hospital, Bay View grounds, for white and colored; capacity, 200 beds.

2nd—State Sanatorium, incipient and advanced cases, white; fifty beds.

3rd—Eudowood, incipient and advanced cases, white; ten beds.

4th—Hebrew Consumptive Hospital, incipient and advanced cases, white; six beds.

STATE SANATORIUM.

In 1913 incipient and advanced cases were sent to the State Sanatorium, and the city kept constantly filled the fifty beds, with a "waiting list" at all times.

During 1913 192 patients were treated at the State Sanatorium for varying periods.

EUDOWOOD.

In 1913 the city has kept filled at Eudowood five beds in the advanced hospital, and five beds in the sanatorium, divided as follows: three beds for men and two beds for women in the hospital for advanced cases, and three beds for women and two beds for men in the division for incipient cases.

During 1913 city patients to the number of thirty-four were treated.

At all times during the year there has been a long "waiting list" of patients desiring to go to the advanced hospital.

HEBREW SANATORIUM.

Six beds at this Sanatorium were filled throughout the year with advanced cases chiefly.

During 1913 thirteen patients were treated at the Hebrew Sanatorium at the expense of the city.

With reference to the Municipal Tuberculosis Hospital, any case was admitted to the Hospital at request, as long as there were vacancies, and when the wards were full a waiting list was kept and patients admitted according to their position on the waiting list; the only exceptions being that moribund patients and those without homes were admitted out of order.

Once a week patients applying for the different sanatoriums were examined at the City Hall Annex, and those who were unable to go, save as free patients, were assigned to the waiting list of the different sanatoriums.

During the past year these waiting lists have been held to strictly, and no patient has gone to a sanatorium as a city patient out of turn.

The policy of the Board is to send its incipient and moderately advanced cases to the State Sanatorium, its Jewish patients to the Hebrew Sanatorium, its far advanced cases to Eudowood, and use the Municipal Tuberculosis Hospital for all patients not included above and for such as are on the waiting list of the sanatoriums, but who have to wait some time on account of their position on the list.

In view of the short distance between the City of Baltimore and Eudowood Sanatorium, I would recommend that a larger number of beds be contracted for at that Sanatorium to care for the bed-ridden and dying consumptives, so that they may be visited at frequent intervals and at short notice by their relatives. During 1913 fifty-seven Baltimoreans died at the State Sanatorium, and as this Sanatorium is two hours by railroad it was practically impossible for these patients to see their families frequently, which could have been done had they been at Eudowood.

Respectfully,

Gordon Wilson, M. D.
Tuberculosis Medical Director.

MUNICIPAL TUBERCULOSIS HOSPITAL

DEATHS DURING 1909.

Sex and Color.	Number of Patients.	Average Age.	Social Condition.				Condition on Admission.			Sputum Examination.			History of Hemorrhage.			Average Number of Days in Hospital.	Average Number of Days in Bed.	Serious Complications. (Definite Clinically.)															Over 5 Years in Hospital.	Over 4 Years in Hospital.	Over 3 Years in Hospital.	Over 2 Years in Hospital.	Over 1 Year in Hospital.	Over 6 Months in Hospital.	Over 3 Months in Hospital.	Less Than 10 Days in Hospital.	Autopsies.
			Single.	Married.	Widowed.	Separated.	Incipient.	Moderately Advanced.	Far Advanced.	Positive.	Negative.	No Record.	Positive.	Negative.	No Record.			Tuberculous Enteritis.	Tuberculosis of Bone.	Tuberculous Laryngitis.	Genito-Urinary Tuberculosis.	Tuberculosis of Tongue.	Miliary Tuberculosis.	Skin Tuberculosis.	Tuberculous Peritonitis.	Diabetes.	Pneumonia.	Syphilis.	Organic Heart Disease.	Cancer of Stomach.	Sarcoma.	Locomotor Ataxia.									
White male......	95	43	57	16	21	1	2	17	75	75	5	15	44	44	7	147	37	1	1	10	3	1	1	1	1	1	2	..	3	2	1	1	1	2	..	3	3	9	10	15	18
White female.....	29	42	12	9	7	1	..	4	25	24	1	4	11	15	3	141	64	1	..	1	..	..	..	..	1	..	3	1	..	..	..	1	..	..	..	2	1	4	3	5	2
Colored male.....	57	34	29	16	6	1	..	10	47	39	3	15	30	18	9	54	40	..	..	3	..	..	..	..	1	..	2	1	..	..	..	..	..	..	..	..	..	2	12	11	4
Colored female...	22	32	12	5	2	3	..	5	17	12	4	6	8	9	5	51	45	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	..	3	7	1
Total white......	124	43	69	25	28	2	2	21	100	99	6	19	55	59	10	146	44	2	1	11	3	1	1	1	2	1	5	1	3	2	1	2	1	2	..	5	4	13	13	20	20
Total colored.....	79	34	41	21	8	4	..	15	64	51	7	21	38	27	14	53	41	..	..	3	..	..	..	..	1	..	3	2	..	..	..	..	..	..	..	..	1	2	15	18	5
Total male.......	152	40	86	32	27	2	2	27	122	114	8	30	74	62	16	112	38	1	1	13	3	1	1	1	2	1	4	1	3	2	1	1	1	2	..	3	3	11	22	26	22
Total female.....	51	38	24	14	9	4	..	9	42	36	5	10	19	24	8	102	56	1	..	1	..	..	..	..	1	..	4	2	..	..	..	1	..	..	..	2	2	4	6	12	3
Totals........	203	39	110	46	36	6	2	36	164	150	13	40	93	86	24	109	43	2	1	14	3	1	1	1	3	1	8	3	3	2	1	2	1	2	..	5	5	15	28	38	25

DISCHARGES, 1909.

Sex and Color.	Number of Patients.	Average Age.	Social Condition.				Condition on Admission.			Sputum Examination.			History of Hemorrhage.			Average Number of Days in Hospital.	Average Number of Days in Bed.	Weight.							Condition on Discharge.				Tuberculous Complications.	Asthma.	Nephritis.	Carcinoma Stomach.	Organic Heart Disease.	Atrophic Cirrhosis.	Locomotor Ataxia.	Syphilis.	Ichthyosis.	Papilloma Bladder.	Epilepsy.	Raynaud's Disease.	Over 2 Years in Hospital.	Over 1 Year in Hospital.	Over 6 Months in Hospital.	Over 3 Months in Hospital.	Less Than 10 Days in Hospital.
			Single.	Married.	Widowed.	Separated.	Incipient.	Moderately Advanced.	Far Advanced.	Positive.	Negative.	No Record.	Positive.	Negative.	No Record.			Number Gaining.	Pounds Gained.	Maximum Gain (Lbs.)	Number Losing.	Maximum Pounds Lost.	Number Not Changing.	Number of Whom No Record.	Apparently Cured.	Arrested.	Improved.	Unimproved.																	
White male......	154	42	77	47	27	2	23	80	50	81	36	37	66	66	23	89	13	87	893	42	17	142	7	43	..	..	100	54	11	2	2	5	3	1	1	1	1	..	..	..	..	3	18	38	28
White female.....	45	32	19	15	7	4	6	20	19	25	11	9	19	22	4	104	19	26	265	25	3	27	7	9	3	2	22	18	1	..	..	..	1	..	..	2	..	..	..	1	2	..	7	8	10
Colored male.....	26	35	19	5	1	1	2	12	11	10	8	8	9	14	3	55	13	12	84	21	2	12	4	8	1	..	11	13	3	..	1	..	..	..	..	2	..	1	..	..	..	..	1	3	5
Colored female...	18	29	13	4	1	..	2	8	8	10	5	3	3	14	1	126	14	7	31	13	1	5	3	7	1	..	7	10	1	..	..	..	..	..	..	2	..	..	1	..	1	..	..	3	2
Total white......	199	40	96	62	34	6	29	100	69	106	47	46	85	88	27	93	15	113	1,158	42	20	169	14	52	3	..	122	72	12	2	2	5	4	1	1	3	1	..	..	1	2	3	25	46	38
Total colored.....	44	33	32	9	2	1	4	20	19	20	13	11	12	28	4	51	13	19	115	21	3	17	7	15	2	2	18	23	4	..	1	..	..	..	..	4	..	1	1	..	1	..	1	6	7
Total male.......	180	41	96	52	28	3	25	92	61	91	44	45	75	80	26	84	13	99	977	42	19	154	11	51	1	..	111	67	14	2	3	5	3	1	1	3	1	1	..	..	..	3	19	41	33
Total female.....	63	31	32	19	8	4	8	28	27	35	16	12	22	36	5	87	17	33	296	25	4	32	10	16	4	2	29	28	2	..	..	..	1	..	..	4	..	..	1	1	3	..	7	11	12
Totals........	243	39	128	71	36	7	33	120	98	126	60	57	97	116	31	99	14	122	1,273	42	23	186	21	67	5	2	140	95	16	2	3	5	4	1	1	7	1	1	1	1	3	3	26	52	45

MUNICIPAL TUBERCULOSIS HOSPITAL

DEATHS DURING 1910.

Sex and Color.	Number of Patients.	Average Age.	Social Condition.				Condition on Admission.			Sputum Examination.			History of Hemorrhage.			Average Number of Days in Hospital.	Average Number of Days in Bed.	Serious Complications. (Definite Clinically.)																					Died Immediately From Hemorrhage.	Over 3 Years in Hospital.	Over 2 Years in Hospital.	Over 1 Year in Hospital.	Over 3 Months in Hospital.	Less Than 1 Month in Hospital.	Less Than 10 Days in Hospital.	Autopsies.
			Single.	Married.	Widowed.	Separated.	Incipient.	Moderately Advanced.	Far Advanced.	Positive.	Negative.	No Record.	Positive.	Negative.	No Record.			Tuberculous Laryngitis.	Tuberculous Enteritis.	Tuberculous Peritonitis.	Tuberculous Osteitis.	Tuberculous Pericarditis.	Tuberculous Meningitis.	Tuberculosis of Tongue.	Tuberculosis of Skin.	Tuber. of Genito-Urinary Tract.	Pneumonia.	Pneumo-Thorax.	Syphilis.	Organic Heart Disease.	Cancer of Stomach.	Locomotor Ataxia.	Nephritis.	Asthma.	Addison's Disease.	Cirrhosis of Liver.	Trichinosis.	Malaria.								
White male	107	43	68	29	10	..	3	12	92	87	9	11	39	53	15	80	46	11	3	1	1	..	1	4	1	1	3	1	..	4	1	1	4	1	..	..	..	1	4	..	1	5	20	27	28	12
White female	32	33	10	13	6	3	..	2	30	28	1	3	14	17	1	96	61	4	1	1	..	..	..	..	..	..	..	1	..	2	..	..	1	..	1	1	1	..	..	..	..	2	8	6	6	5
Colored male	52	37	32	12	2	6	2	2	48	40	4	8	26	20	6	78	42	6	..	1	1	1	..	..	..	..	..	..	..	1	..	..	2	..	..	..	..	..	3	1	..	1	9	9	17	5
Colored female	27	32	16	2	6	3	..	2	25	25	1	1	13	13	1	68	62	2	2	..	..	..	..	..	..	..	..	..	2	2	..	..	1	..	..	..	..	..	..	..	..	..	7	12	2	5
Total white	139	41	78	42	16	3	3	14	122	115	10	14	53	70	16	84	49	15	4	2	1	..	1	4	1	1	3	2	..	6	1	1	5	1	1	1	1	1	4	..	1	7	28	33	34	17
Total colored	79	35	48	14	8	9	2	4	73	65	5	9	39	33	7	75	50	8	2	1	1	1	..	..	..	..	..	..	2	3	..	..	3	..	..	..	..	..	3	1	..	1	16	21	19	10
Total male	159	41	100	41	12	6	5	14	140	127	13	19	65	73	21	79	45	17	3	2	2	1	1	4	1	1	3	1	..	5	1	1	6	1	..	..	..	1	7	1	1	6	29	36	45	17
Total female	59	33	26	15	12	6	..	4	55	53	2	4	27	30	2	83	61	6	3	1	..	..	..	..	..	..	..	1	2	4	..	..	2	..	1	1	1	..	..	..	..	2	15	18	8	10
Totals	218	39	126	56	24	12	5	18	195	180	15	23	92	103	23	80	49	23	6	3	2	1	1	4	1	1	3	2	2	9	1	1	8	1	1	1	1	1	7	1	1	8	44	54	53	27

DISCHARGES, 1910.

Sex and Color.	Number of Patients.	Average Age.	Social Condition.				Condition on Admission.			Sputum Examination.			History of Hemorrhage.			Average Number of Days in Hospital.	Average Number of Days in Bed.	Weight.							Condition on Discharge.				Serious Complications.													Over 1 Year in Hospital.	Over 6 Months in Hospital.	Less Than 1 Month in Hospital.	Less Than 10 Days in Hospital.
			Single.	Married.	Widowed.	Separated.	Incipient.	Moderately Advanced.	Far Advanced.	Positive.	Negative.	No Record.	Positive.	Negative.	No Record.			Number Gaining.	Average Amount Gained (Lbs.)	Maximum Gained (Lbs.)	Number Losing.	Average Amount Lost (Lbs.)	Number Not Changing.	Number of Whom No Record.	Apparently Cured.	Arrested.	Improved.	Unimproved.	Tuberculous Complications.	Asthma.	Nephritis.	Organic Heart Disease.	Malaria.	Aneurysm of Aorta.	Syphilis.	Appendicitis.	Graves' Disease.	Gout.	Typhoid.	Cirrhosis of Liver.	Erysipelas.				
White male	187	40	88	68	18	13	57	59	71	130	44	13	82	99	6	79	13	83	10	47	25	5	14	66	9	2	80	96	20	6	2	8	1	..	2	1	..	1	1	1	1	2	19	30	43
White female	46	39	12	16	15	3	10	14	22	32	11	3	22	22	2	94	30	23	7	21	6	6	3	14	3	4	18	21	4	..	3	3	1	..	..	..	1	..	..	..	..	2	6	6	8
Colored male	23	37	13	4	4	2	5	6	12	21	2	..	15	8	..	135	23	14	10	29	5	9	..	4	2	2	11	8	2	1	1	2	..	1	1	..	..	..	..	..	..	2	4	4	1
Colored female	20	34	9	5	6	..	5	4	11	16	3	1	8	11	1	102	47	8	9	22	8	5	2	2	1	..	10	9	1	..	2	2	..	..	2	..	..	..	..	..	..	1	4	5	..
Total white	233	40	100	84	33	16	67	73	93	162	55	16	104	121	8	82	16	106	9	47	31	5	17	80	12	6	98	117	24	6	5	11	2	..	2	1	1	1	1	1	1	4	25	36	51
Total colored	43	36	22	9	10	2	10	10	23	37	5	1	23	19	1	120	34	22	9	29	13	7	2	6	3	2	21	17	3	1	3	4	..	1	3	..	..	..	..	..	..	3	8	9	1
Total male	210	39	101	72	22	15	62	65	83	151	46	13	97	107	6	85	14	97	9	47	30	6	14	70	11	4	91	104	22	7	3	10	1	..	3	1	..	1	1	1	1	4	23	34	44
Total female	66	37	21	21	21	3	15	18	33	48	14	4	30	33	3	96	35	31	7	22	14	5	5	16	4	4	28	30	5	..	5	5	1	1	2	..	1	..	..	..	..	3	10	11	8
Totals	276	39	122	93	43	18	77	83	116	199	60	17	127	140	9	88	19	128	9	47	44	6	19	86	15	8	119	134	27	7	8	15	2	1	5	1	1	1	1	1	1	7	33	45	52

MUNICIPAL TUBERCULOSIS HOSPITAL

DEATHS DURING 1911.

Sex and Color.	Number of Patients.	Average Age.	Social Condition.				Condition on Admission.			Sputum Examination.			History of Hemorrhage			Average Number of Days in Hospital.	Average Number of Days in Bed.	Serious Complications. (Definite Clinically.)																								Died Immediately from Hemorrhage.	Over 5 Years in Hospital.	Over 3 Years in Hospital.	Over 2 Years in Hospital.	Over 1 Year in Hospital.	Over 3 Months in Hospital.	Less Than 1 Month in Hospital.	Less Than 10 Days in Hospital.	Autopsies.
			Single.	Married.	Widowed.	Separated.	Incipient.	Moderately Advanced.	Far Advanced.	Positive.	Negative.	No Record.	Positive.	Negative.	No Record.			Tuberculous Laryngitis.	Tuberculous Enteritis.	Tuberculous Peritonitis.	Tuberculous Osteitis.	Tuberculous Pericarditis.	Tuberculous Meningitis.	Tuberculosis of Tongue.	Tubercolis of Skin.	Tuber. of Genito-Urinary Tract.	Tuberculosis of Tonsils.	Valvular Heart Disease.	Exopthalmic Goitre.	Nephritis.	Asthma.	Tinea Saginata.	Chronic Pneumo-thorax.	Syphilis.	Epilepsy.	Keloid.	Korsukoff's Syndrome.	Blastomycosis.	Locomotor Ataxia.	Diabetes Mellitus.	Aneurysm of Aorta.									
White male......	84	40	52	19	13	..	..	5	79	70	8	6	34	42	8	16	82	5	11	3	2	..	4	..	..	..	..	1	..	2	1	..	..	..	2	..	..	1	1	1	1	5	1	3	2	4	17	25	16	6
White female.....	32	38	9	16	7	..	*1	..	31	29	3	..	8	22	2	75	65	2	4	..	1	..	..	..	..	..	..	2	1	1	1	1	..	..	..	..	..	..	..	..	..	1	..	..	..	1	8	6	8	..
Colored male.....	56	35	33	16	5	2	*3	..	53	46	4	6	17	33	6	65	52	2	3	..	3	..	..	..	..	..	..	3	..	1	..	..	1	1	1	1	1	..	..	..	..	2	..	..	..	1	9	15	11	3
Colored female...	34	30	25	6	3	..	..	..	34	31	..	3	7	25	2	46	33	3	6	1	..	..	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	8	7	..
Total white......	116	39	61	35	20	..	1	5	110	99	11	6	42	64	10	141	77	7	15	3	3	..	4	..	..	..	..	3	1	3	2	1	..	..	2	..	..	1	1	1	1	6	1	3	2	5	25	31	24	6
Total colored.....	90	32	58	22	8	2	3	..	87	77	4	9	24	58	8	57	45	5	9	1	3	..	1	..	..	..	1	4	..	1	..	..	1	1	1	1	1	..	..	..	..	2	..	..	..	2	11	23	18	3
Total male.......	140	38	85	35	18	2	3	5	132	116	12	12	51	75	14	125	70	7	14	3	5	..	4	..	..	..	..	4	..	3	1	..	1	1	3	1	1	1	1	1	1	7	1	3	2	5	26	40	27	9
Total female.....	66	32	34	22	10	..	1	..	65	60	3	3	15	47	4	60	49	5	10	1	1	..	1	..	..	..	1	3	1	1	1	1	..	..	..	..	..	..	..	..	..	1	..	..	..	2	10	14	15	..
Totals........	206	36	119	57	28	2	4	5	197	176	15	15	66	122	18	104	63	12	24	4	6	..	5	..	..	..	1	7	1	4	2	1	1	1	3	1	1	1	1	1	1	8	1	3	2	7	36	54	42	9

*Doubtful.

DISCHARGES, 1911.

Sex and Color.	Number of Patients.	Average Age.	Social Condition.				Condition on Admission.			Sputum Examination.			History of Hemorrhage.			Average Number of Days in Hospital.	Average Number of Days in Bed.	Weight.							Condition on Discharge.				Serious Complications.																	Over 1 Year in Hospital.	Over 6 Months in Hospital.	Less Than 1 Month in Hospital.	Less Than 10 Days in Hospital.
			Single.	Married.	Widowed.	Separated.	Incipient.	Moderately Advanced.	Far Advanced.	Positive.	Negative.	No Record.	Positive.	Negative.	No Record.			Number Gaining.	Average Amount Gained (Lbs.)	Maximum Gained (Lbs.)	Number Losing.	Average Amount Lost (Lbs.)	Number Not Changing.	Number of Whom No Record.	Apparently Cured.	Arrested.	Improved.	Unimproved.	Valvular Heart Disease.	Pregnancy.	Tuberculous Complications.	Measles.	Aneurysm of Aorta.	Hepatic Abscess.	Hemiplegia.	Locomotor Ataxia.	Pernicious Anæmia.	Addison's Disease.	Syphilis.	Carcinoma of Tongue.	Fracture of Hip.	Nephritis (Chronic).	Raynaud's Disease.	Hystero-Epilepsy.	Asthma.				
White male......	155	33	78	56	18	3	26	39	90	93	40	22	48	88	19	89	40	61	10	38	29	5	40	25	..	7	64	84	8	..	9	..	1	..	1	1	2	1	..	1	..	..	..	..	2	11	31	15	14
White female....	43	30	18	13	10	2	10	14	19	20	10	13	11	15	7	97	41	16	13	47	15	6	10	2	..	1	22	20	2	2	6	..	..	..	..	..	..	..	1	..	..	1	1	1	1	3	8	15	5
Colored male.....	26	34	18	7	1	..	1	..	25	19	5	2	10	14	2	101	49	8	9	24	10	5	4	3	1	..	9	16	2	..	6	..	..	1	..	..	..	..	1	..	..	1	..	..	..	1	6	5	2
Colored female...	24	29	13	6	2	3	7	10	7	7	14	3	9	12	3	125	32	13	10	38	5	9	4	2	2	..	13	9	..	1	1	1	1	..	..	..	..	..	1	..	..	..	..	..	..	1	4	8	4
Total white......	198	32	96	69	28	5	36	53	109	113	50	35	59	103	26	91	40	77	11	47	44	5	50	27	..	8	86	104	10	2	15	..	1	..	1	1	2	1	1	1	..	1	1	1	3	14	39	65	19
Total colored.....	50	32	31	13	3	3	8	10	32	26	19	5	19	26	5	112	41	21	10	38	15	6	8	5	3	..	22	25	2	1	7	1	1	1	..	..	..	..	2	..	..	1	..	..	..	2	10	13	6
Total male.......	181	33	96	63	19	3	27	39	115	112	45	24	58	102	21	91	41	69	10	38	39	5	44	28	1	7	73	100	10	..	15	..	1	1	1	1	2	1	1	1	..	1	..	..	2	12	37	55	16
Total female.....	67	30	31	19	12	5	17	24	26	27	24	16	20	27	10	107	38	29	12	47	20	7	14	4	2	1	35	29	2	3	7	1	1	..	..	..	..	..	2	..	..	1	1	1	1	4	12	23	9
Totals........	248	32	127	82	31	8	44	63	141	139	69	40	78	129	31	95	40	98	10	47	59	6	58	32	3	8	108	129	12	3	22	1	2	1	1	1	2	1	3	1	..	2	1	1	3	16	49	78	25

MUNICIPAL TUBERCULOSIS HOSPITAL

DEATHS DURING 1912.

Sex and Color.			Social Condition.				Condition on Admission.			Sputum Examination.			History of Hemorrhage.														Serious Complications.																
	Number of Patients.	Average Age.	Single.	Married.	Widowed.	Separated.	Incipient.	Moderately Advanced.	Far Advanced.	Positive.	Negative.	No Record.	Positive.	Negative.	No Record.	Average Number of Days in Hospital.	Average Number of Days in Bed.	Died from Hemorrhage.	Over 5 Years in Hospital.	Over 3 Years in Hospital.	Over 2 Years in Hospital.	Over 1 Year in Hospital.	Over 3 Months in Hospital.	Less Than 1 Month in Hospital.	Less Than 10 Days in Hospital.	Autopsies.	Axillary Abscess.	Lues.	Appendicitis.	Nephritis.	Valvular Heart Disease.	Thrombosis.	Pneumonia.	Empyema.	Pneumothorax.	Arthritis Deformans.	Pregnancy.	Multiple Neuritis.	Alcoholic Neuritis.	Asthma.	Arthritic Purpura.	Erysipelas.	Gastric Carcinoma.
White male.......	101	41	63	21	5	12	1	11	89	73	22	6	43	52	6	124	55	3	1	2	...	2	23	23	20	2	..	..	..	1	1	1	..	..	1	..	..	..	1	1	1	1	1
White female.....	35	37	6	17	9	3	1	5	29	27	7	1	6	28	1	178	77	...	...	1	1	1	15	5	5	..	..	..	..	1	..	..	..	..	1	1	1	1	..	..	..	..	..
Colored male.....	49	36	36	8	2	3	...	3	46	34	4	11	21	17	11	69	34	1	...	...	1	1	8	14	16	..	..	..	..	3	1	..	1	1	1	..	..	..	..	..	..	..	..
Colored female...	29	31	13	10	5	1	...	...	29	17	8	4	8	17	4	54	46	2	...	...	...	...	6	6	8	..	2	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total white.......	136	...	69	38	14	15	2	16	118	100	29	7	49	80	7	138	61	3	1	3	1	3	38	28	25	2	..	..	..	2	1	1	..	..	2	1	1	1	1	1	1	1	1
Total colored.....	78	...	49	18	7	4	...	3	75	51	12	15	29	34	15	64	39	3	...	...	1	1	14	20	24	..	2	1	1	3	1	..	1	1	1	..	..	..	..	..	..	..	..
Total male.......	150	...	99	29	7	15	1	14	135	107	26	17	64	69	17	106	48	4	1	2	1	3	31	37	36	2	..	..	..	4	2	1	1	1	2	..	..	..	1	1	1	1	1
Total female.....	64	...	19	27	14	4	1	5	58	44	15	5	14	45	5	122	63	2	...	1	1	1	21	11	13	..	2	1	1	1	..	..	..	..	1	1	1	1	..	..	..	..	..
Totals........	214	...	118	56	21	19	2	19	193	151	41	22	78	114	22	111	53	6	1	3	2	4	52	48	49	2	2	1	1	5	2	1	1	1	3	1	1	1	1	1	1	1	1

DISCHARGES, 1912.

Sex and Color.			Social Condition.				Condition on Admission.			Sputum Examination			History of Hemorrhage.					Weight.							Condition on Discharge.								Serious Complications.																			
	Number of Patients.	Average Age.	Single.	Married.	Widowed.	Separated.	Incipient.	Moderately Advanced.	Far Advanced.	Positive.	Negative.	No Record.	Positive.	Negative.	No Record.	Average Number of Days in Hospital.	Average Number of Days in Bed.	Number Gaining.	Average Amount Gained (Lbs.)	Maximum Gained (Lbs.)	Number Losing.	Average Amount Lost (Lbs.)	Number Not Changing.	No Record.	Apparently Cured.	Arrested.	Improved.	Unimproved.	Over 1 Year in Hospital.	Over 6 Months in Hospital.	Less Than 1 Month in Hospital.	Less Than 10 Days in Hospital.	Pregnancy.	Endocarditis.	Valvular Heart Disease.	Optic Atrophy.	Appendicitis.	Syphilis.	Pneumothorax.	Arthritic Purpura.	Epilepsy.	Carcinoma (Stomach).	Asthma.	Aneurysm.	Alcoholic Neuritis.	Pernicious Anæmia.	Angina Pectoris.	Raynaud's Disease.	Locomotor Ataxia.	Malaria.	Erysipelas.	Empyema.
White male......	181	40	85	74	16	6	10	80	91	104	71	6	55	120	6	102	25	59	10	33	52	5	25	45	..	8	80	93	9	20	45	23	...	...	2	1	2	2	1	1	1	2	1	1	2	1	..	..	..	..	1	1
White female.....	67	35	26	23	16	2	4	40	23	31	45	1	11	55	1	139	25	31	4	19	14	4	1	21	4	3	32	28	4	5	17	4	2	..	1	..	1	2	..	..	..	..	1	..	..	..	1	1	1	..	..	..
Colored male.....	42	29	29	8	...	5	3	20	19	23	17	2	10	30	2	94	31	10	15	41	16	6	..	16	3	1	18	20	1	4	5	7	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Colored female...	18	28	9	5	3	1	1	8	9	6	12	..	3	15	..	65	31	11	10	38	1	4	2	4	1	..	8	9	..	1	3	3	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total white......	248	39	111	97	32	8	14	120	114	135	116	7	66	175	7	112	25	90	8	33	66	5	26	66	4	11	112	121	13	25	62	27	2	..	3	1	3	4	1	1	1	2	2	1	2	1	1	1	1	..	1	1
Total colored.....	60	29	38	13	3	6	4	28	28	29	29	2	13	45	2	83	31	21	12	41	17	6	2	20	4	1	26	29	1	5	8	10	1	1	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Total male.	223	38	114	82	16	11	13	100	110	127	88	8	65	150	8	100	26	69	11	41	68	5	25	61	3	9	98	113	10	24	50	30	...	...	5	1	2	2	1	1	1	2	1	1	2	1	..	..	..	1	1	2
Total female.....	85	33	35	28	19	3	5	48	32	37	57	1	14	70	1	122	26	42	6	38	15	4	3	25	5	3	40	37	4	6	20	7	3	1	3	..	1	2	..	..	..	..	1	..	..	..	1	1	1	..	..	..
Totals........	308	36	149	110	35	14	18	148	142	164	145	9	79	220	9	106	26	111	9	41	83	5	28	86	8	12	138	150	14	30	70	37	3	1	8	1	3	4	1	1	1	2	2	1	2	1	1	1	1	1	1	2

MUNICIPAL TUBERCULOSIS HOSPITAL

DEATHS DURING 1913.

Sex and Color.	Number of Patients.	Average Age.	Social Condition. Single.	Married.	Widowed.	Separated.	Condition on Admission. Incipient.	Moderately Advanced.	Far Advanced.	Sputum Examination. Positive.	Negative.	No Record.	History of Hemoptysis. Positive.	Negative.	No Record.	Average Number of Days in Hospital.	Average Number of Days in Bed.	Over 5 Years in Hospital.	Over 3 Years in Hospital.	Over 2 Years in Hospital.	Over 1 Year in Hospital.	Over 3 Months in Hospital.	Less Than 1 Month in Hospital.	Less Than 10 Days in Hospital.	Autopsies.	Serious Complications. (Non-Tubercular.) Valvular Heart Disease.	Aneurysm.	Nephritis.	Pericarditis.	Endocarditis.	Neuritis.	Syphilis.	Goitre.	Died from Hemorrhage.	Asthma.	Phlebitis.	Pregnancy.
White male	113	44	53	32	22	5	1	5	107	76	25	12	29	77	7	164	47	2	2	3	3	26	25	23	21	8	..	4	2	4	2	1	1	2	1	..	..
White female	36	41	9	17	9	1	...	1	35	23	10	3	10	25	1	71	60	...	...	...	...	10	8	10	7	1	..	..	..	1	..	..	..	1	..	1	1
Colored male	78	38	43	19	7	9	1	4	73	54	19	5	36	41	1	52	45	...	...	...	...	12	20	22	11	4	1	1	1	1	..	..	..	3	..	..	..
Colored female	34	33	13	9	7	5	1	2	31	21	10	3	4	27	3	57	42	...	...	...	1	5	11	6	3	2	..	1	..	1	..	2	..	1	..	..	..
Total white	149	43	62	49	31	6	1	6	142	99	35	15	39	102	8	142	51	2	2	3	3	36	33	33	28	9	..	4	2	5	2	1	1	3	1	1	1
Total colored	112	36	56	28	14	14	2	6	104	75	29	8	40	68	4	54	44	...	...	...	1	17	31	28	14	6	1	2	1	2	..	2	..	4	..	..	..
Total male	191	41	96	51	29	14	2	9	180	130	44	17	65	118	8	118	46	2	2	3	3	38	45	45	32	12	1	5	3	5	2	1	1	5	1	..	..
Total female	70	37	22	26	16	6	1	3	66	44	20	6	14	52	4	63	51	...	...	...	1	15	19	16	10	3	..	1	..	2	..	2	..	2	..	1	1
Totals	261	40	118	77	45	20	3	12	246	174	64	23	79	170	12	106	47	2	2	3	4	53	64	61	42	15	1	6	3	7	2	3	1	7	1	1	1

DISCHARGES, 1913.

Sex and Color.	Number of Patients.	Average Age.	Social Condition. Single.	Married.	Widowed.	Separated.	Condition on Admission. Incipient.	Moderately Advanced.	Far Advanced.	Sputum Examination. Positive.	Negative.	No Record.	History of Hemoptysis. Positive.	Negative.	No Record.	Average Number of Days in Hospital.	Average Number of Days in Bed.	Weight. Number Gaining.	Average Amount Gained (Lbs.)	Maximum Gained (Lbs.)	Number Losing.	Average Amount Lost (Lbs.)	Number Not Changing.	No Record.	Condition on Discharge. Apparently Cured.	Arrested.	Improved.	Unimproved.	Over 1 Year in Hospital.	Over 6 Months in Hospital.	Less Than 1 Month in Hospital.	Less Than 10 Days in Hospital.	Serious Complications. (Non-Tubercular.) Valvular Heart Disease.	Endocarditis.	Asthma.	Syphilis.	Neuritis.	Pregnancy.	Tumor (malignant).	Nephritis.	Typhoid.	Leukaemia.	Locomotor Ataxia.	Cholecystitis.
White male	147	43	72	41	23	11	12	65	70	68	73	6	59	87	1	98	24	63	11	40	29	7	14	41	..	7	65	75	3	11	31	10	2	..	1	5	1	..	..	..	..	1	1	1
White female	44	35	10	23	8	3	5	22	17	17	25	2	7	37	..	112	49	18	6	43	8	4	9	9	..	1	17	26	2	2	12	5	5	..	..	..	2	2	2	..	..	..	..	..
Colored male	37	31	29	13	3	2	8	13	16	14	22	1	8	29	..	55	22	12	7	27	11	3	2	12	..	1	13	23	1	..	15	7	1	..	..	4	..	..	1	1	..	..	..	..
Colored female	33	25	24	2	3	4	8	16	9	12	21	..	6	27	..	77	29	12	12	31	8	5	3	10	..	3	11	19	1	1	6	6	2	1	..	2	..	..	1	..	1	..	..	..
Total white	191	41	82	64	31	14	17	87	87	85	98	8	66	124	1	101	29	83	10	43	37	6	23	50	..	8	82	101	5	13	43	15	7	..	1	5	3	2	2	..	..	1	1	1
Total colored	70	28	53	15	6	6	16	29	25	26	43	1	14	56	..	66	25	24	9	31	19	4	5	22	..	4	24	42	2	1	21	13	3	1	..	6	..	..	2	1	1	..	..	..
Total male	184	40	101	54	26	13	20	78	86	82	95	7	67	116	1	90	23	75	10	40	40	6	16	53	..	8	78	98	4	11	46	17	3	..	1	9	1	..	1	1	1	1	1	1
Total female	77	31	34	25	11	7	13	38	26	29	46	2	13	64	..	97	40	30	8	43	16	5	12	19	..	4	28	45	3	3	18	11	7	1	..	2	2	2	3	..	..	..	..	..
Totals	261	37	135	79	37	20	33	116	112	111	141	9	80	180	1	92	28	105	9	43	56	6	28	72	..	12	106	133	7	14	64	28	10	1	1	11	3	2	4	1	1	1	1	1

DEATHS FROM TUBERCULOSIS IN BALTIMORE.

SEX AND COLOR.	1909.	1910.	1911.	1912.	1913.
White males	507	504	500	507	491
White females	402	380	346	359	341
Colored males	270	249	269	259	281
Colored females	221	232	229	221	223
Total white	909	884	846	866	832
Total colored	491	481	498	480	504
Total male	777	753	769	766	772
Total female	623	612	575	580	564
Total	1,400	1,365	1.344	1.346	1,336

DEATHS FROM TUBERCULOSIS AT MUNICIPAL TUBERCULOSIS HOSPITAL.

SEX AND COLOR.	1909.	1910.	1911.	1912.	1913.
White males	95	107	84	101	113
White females	29	32	32	35	36
Colored males	57	52	56	49	78
Colored females	22	27	34	29	34
Total white	124	139	116	136	149
Total colored	79	79	90	78	112
Total male	152	159	140	150	181
Total female	51	159	66	64	70
Total	203	218	206	214	261

Percentage Dying of Tuberculosis at Municipal Tubrculosis Hospital, as Compared With Tuberculous Deaths in Baltimore.

Sex and Color.	1909. Per Ct.	1910. Per Ct.	1911. Per Ct.	1912. Per Ct.	1913. Per Ct.
White males	18.7	21.2	16.8	19.9	23.0
White females	7.2	8.4	9.2	9.7	10.5
Colored males	21.1	20.9	20.9	18.9	27.7
Colored females	9.9	11.6	14.8	13.1	15.2
Total white	13.6	15.7	13.7	15.7	17.9
Total colored	16.1	16.4	18.0	16.2	22.2
Total male	19.5	21.1	18.2	19.5	23.4
Total female	8.2	9.6	11.4	11.0	12.4
Total	14.5	15.9	15.3	15.8	19.5

Deaths of Baltimoreans from Tuberculosis at Other Sanatoria in Maryland—1909, 12; 1910, 25; 1911, 39; 1912, 50; 1913, 78.

Total Deaths from Tuberculosis in Baltimoreans—1909, 1,412; 1910, 1,390; 1911, 1,383; 1912, 1,396; 1913, 1,414.

Percentage of Baltimoreans Dying in Special Tuberculosis Hospitals, as Compared With All Tuberculous Deaths—1909, 15.2 per cent.; 1910, 17.5 per cent.; 1911, 18.4 per cent.; 1912, 18.8 per cent.; 1913, 23.9 per cent.

Percentage of Baltimoreans Dying in Special Tuberculosis Hospitals, as Compared With All Tuberculous Deaths (Children Under 15 Years of Age Excluded)—1909, 16.8 per cent.; 1910, 19.3 per cent.; 1911, 20.6 per cent.; 1912, 21.9 per cent.; 1913, 26.8 per cent.

PRESENT POLICY OF THE SUPERVISORS OF CITY CHARITIES WITH TUBERCULOSIS SANATORIUMS HAVING "CITY BEDS."

First.—Those patients on the city list shall remain on this list so long as the superintendent of the sanatorium shall wish, not to exceed a total stay of more than six months, after which time the patient shall not be eligible for a city bed at the sanatorium.

Second.—As vacancies occur they shall be filled *in order* from the waiting list, duplicate copies of which shall be kept by the superintendent and by the agent of the Supervisors of City Charities.

Third.—An applicant for a city bed shall present an application filled out to the Tuberculosis Medical Director at the Supervisors' office in the City Hall Annex, on any Wednesday morning at 9 o'clock. If the applicant is a patient of the sanatorium at time of application, it shall not be necessary for him to present it is person. but he can mail it with endorsement of the superintendent to the agent of the Supervisors, and his name will be entered on the waiting list.

Fourth.—The agent of the Supervisors will accept without further medical examination an applicant for the sanatorium when endorsed on appended blank by the superintendent of this sanatorium, and his name will be entered in its regular order on the waiting list for this sanatorium.

Fifth.—When the agent of the Supervisors shall enter a name on the waiting list for the sanatorium, he will also mail to the superintendent of the sanatorium the name of the said applicant, together with such particulars about him as may seem necessary.

Sixth.—Once a month the agent of the Supervisors will mail a copy of his waiting list to the superintendent, to avoid errors.

Seventh.—If it is so desired, a separate waiting list for each sex will be kept, and a separate list for incipient and for advanced cases, this to be carried out only at the request of the superintendent, and if carried out there shall be a definite division of the total number of beds, both with reference to sex and to the stage of the disease.

Eighth.—No patient shall be eligible for a city bed at a sanatorium who has had in the past the benefit of sanatorium treatment.

CITY PATIENTS IN HOSPITALS DURING 1913

HOSPITALS.	Patients in Beds, 50c. per day.	Hospital, Days.	Out Patients, 50c. per day.	Payments.
Mercy Hospital	1,912	32,941	1,200	$17,070 50
University of Maryland	887	20,130	694	10,412 00
Maryland General	860	15,755	579	8,167 00
St. Joseph's	920	19,572	400	9,986 00
Maryland Homeopathic	367	7,320	400	3,860 00
St. Agnes'	465	12,705	....	6,352 50
Crippled Children's	75	8,418	....	4,209 00
Eudowood Sanatorium	29	3,650	....	1,825 00
State Sanatorium	182	18,250	....	4,988 34
Jewish Home for Consumptives	12	2,190	....	1,095 00
Franklin Square Hospital	294	3,584	....	1,792 00
Total	6,003	144,515	3,273	$69,757 34

Appropriation		$75,379 00
Expended for indoor patients	$68,120 84	
Expended for out-patients	1,636 50	
		69,757 34
Unexpended balance		$5,621 66

126,265 days were paid for at 50 cents per day	$63,132 50
18,250 days were paid for at 27⅓ cents per day	4,988 34
Total	$68,120 84

NUMBER OF PATIENTS BY MONTHS.

Months.	Entered During Month.	Out-Patients.
In beds January 1, 1913	558	....
January	495	255
February	516	225
March	475	267
April	492	275
May	469	290
June	547	278
July	506	295
August	512	290
September	444	313
October	471	320
November	453	285
December	341	180
Total	6.279	3.273

Respectfully submitted,

EMILY DUVALL,
Hospital Clerk and Visitor.

DISPENSARY TREATMENTS DURING 1913.

DISPENSARY.	Treatments at Dispensary at 25c. each.	Visits at Homes at 50c each.	Prescriptions at 15c. each.	Payments.
Eastern	4,000	400	....	$1,200 00
Northeastern	4,000	800	164	1,424 60
Baltimore General	3,600	1,000	57	1,408 55
Baltimore Eye, Ear and Throat	2,800	....	....	700 00
Fell's Point	2,800	550	166	999 90
Locust Point	1,300	300	166	499 90
City Medical Agencies—				
Southern	2,933	789	....	1,207 28
Northwestern	5,620	599	....	1,286 91
Western	3,371	595	....	1,522 99
Total	30,424	5,033	553	$10,250 13

EXPENSES OF CITY MEDICAL AGENCIES.

DISBURSEMENTS.	Southern.	Northwestern.	Western.	Total.
For salaries	$957 17	$943 16	$958 61	$2,858 94
For rent	180 00	150 00	198 00	528 00
For car fare	10 25	15 80	11 80	37 85
For drugs	55 36	139 50	194 27	389 13
For incidentals	2 50	10 45	17 45	30 40
For extra medical service	2 00	28 00	20 00	50 00
For repairs and furnishings	....	....	122 86	122 86
Total	$1,207 28	$1,286 91	$1,522 99	$4,017 18

TRANSPORTATION OF THE DESTITUTE

This transportation fund is not intended to be used indiscriminately for the traveling expenses of the poor. It is only used for sending away from the city persons who are already charges or likely to become charges upon charity or upon the city, and for the purpose of sending them only to those places where inquiry made by our clerks shows they have work assured them or relatives or friends ready to care for them. If suitable cases, they are then sent to such places, no matter how distant. A large number of applicants either cannot or will not give any references from the place in which they claim to belong. Able-bodied men are rarely given transportation, and every effort is made to secure reimbursement from friends or relatives when possible.

No hardship falls on the applicants pending inquiry, as they are cared for, if destitute, by some co-operative charity, or at the almshouse. The amount of the fund expended yearly has not increased, but is about one-half and sometimes only about one-third of what was expended some years ago, before the Supervisors took charge of this branch of the work. Every applicant is dealt with carefully and considerately, with a view to transporting him to his home, if it is wise to do so.

DISPOSITION OF APPLICANTS.

Refused by us for cause	41
Would not allow investigation to be made	18
Referred to United States Commissioner of Immigration	14
Referred to Federated Charities	22
Referred to St. Vincent de Paul Society	2
Did not return after satisfactory investigation	3
Had money to pay fare	1
Fare sent by friends	18
Transported after satisfactory investigation	98
Total	217

Expenditures:			
Fares	$501 23	Appropriation	$1,000 00
Sundries	9 50	Expended	510 73
Total	$510 73	Balance	$489 27

Aliens reported to United States Commissioner of Immigration		14
Had pulmonary tuberculosis	3	
Insane	7	
Public charges in hospitals	4	
		14
Were deported at expense of United States Government	5	
Escaped after order for deportation was granted	1	
Refused deportation for cause by United States Government	6	
Pending	2	
		14

Respectfully submitted,

George Schuster,

Chief Clerk Supervisors of City Charities.

TEMPORARY CARE OF HOMELESS MEN

Since the old custom of allowing men to lodge in the police stations was wisely abandoned, the Friendly Inn Association has undertaken to give food and lodging to homeless men in return for work. The Association offers more comfortable and sanitary care than the police had given or could give. This institution developed as the expression of the feeling of many of our citizens that there should be a place where able-bodied men could secure food and lodging in return for work done by them, and be thus made independent of the alms of the public. Each man has the privilege of a bath, hot and cold water, individual towels, clean night clothing and a clean bed in a comfortable room, the bed linen being changed daily. It is impossible for men of the tramp class to make a rendezvous of this institution, for a tramp will not work, and the rules of the Inn make it impossible for a man to remain longer than three days without special permission from the manager, which means that he must justify his remaining longer, either by showing a disposition to get work or by some other valid reason, each case being dealt with according to circumstances and facts.

The city has been paying the Association under contract the sum of 20 cents a day each for the care of its proportion of beneficiaries. The sum total does not exceed $2,000, the amount expended this year being about $2,000.

The almshouse is too far from the city to be used for admissions late in the day, and an institution like the Inn, whose benefits are earned by work, is the best agency for dealing with homeless men. The exceptional applicants who are too infirm to work are sent the next day by the Inn to the Bay View office.

The Friendly Inn Lodging House provided during the past year 13,061 meals and 7,912 lodgings for work done at the Inn. One hundred and ninety-nine meals and 300 lodgings were given free to those who were physically incapable of work, pending their transfer to Bay View, hospitals or other places suited to their needs. Five thousand eight hundred and twenty baths were taken, 5,820 suits of clothing were fumigated and a number availed themselves of the free use of the laundry. Permanent was secured for 50 and temporary employment for 130.

Some years ago it was decided to extend the time for obtaining food in return for work from 6 P. M. to midnight. This was done in the interest of those who might hesitate to send a hungry man to the Inn during the night hours.

CHILDREN'S DEPARTMENT

During the year ending December 31, 1913, 133 applications were made to have 234 children placed in institutions or otherwise cared for. A number of applications came to us in which the children were not primarily involved and the cases were at once referred to the proper agencies for relief. These, of course, are not included in this report. The recorded applications were disposed of as follows:

	White.		Colored.		Total.
	Male.	Female.	Male.	Female.	
Referred to private charity with hope of keeping the family together or of the family paying board for the children	23	19	14	8	64
Referred to private charity to place in good free private homes	10	15	5	1	31
Parents or relatives found able and willing to care for	25	12	13	8	58
Total not accepted	58	46	32	17	153
Placed in institutions as follows to become city charges:					
St. Vincent's Infant Asylum	10	9	......	......	19
Nursery and Child's Hospital	7	8	......	......	15
St. Elizabeth's Home for Colored Children	......	......	8	5	13
St. Mary's Home for Colored Boys	......	......	3	......	3
Maryland Home for Friendless Colored Children	......	......	5	2	7
Home of the Friendless	3	5	......	......	8
St. Vincent's Male Orphan Asylum	4	......	......	......	4
St. Mary's Female Orphan Asylum	......	7	......	......	7
St. Katherine's Home for Little Colored Girls	......	......	......	5	5
Total accepted	24	29	16	12	81

Of the above 234 children, 41 were illegitimate, 17 white and 24 colored; 17 were abandoned, 11 white and 6 colored, of whom 13 were foundlings, 9 white and 4 colored.

We were summoned by the magistrate for juvenile causes to appear in 63 cases, involving 133 children, 100 white and 33 colored. Parents were allowed to retain 36 of these children, 5 were committed to industrial schools, and 92 were committed as neglected children, 26 to private agencies and 66 to institutions; 63 to become city charges and 29 to be maintained without expense to the city.

Thirty-five children, 30 white and 5 colored, were returned to parents and other relatives. As far as possible, we have kept in touch with parents and relatives of the children under our supervision. Requests came from many of them to have the children returned to their care. After careful inquiry and visitation of the homes, their requests were granted, only where conditions were found favorable to the proper development of the children.

A number of free private homes were offered during the year for our wards. Some were refused as unsuitable. For several there were no children of the age desired. Seventy-nine were accepted after visitation and careful inquiry by correspondence and interview with pastors and physicians and others, and 80 of the children, 56 white and 24 colored, were placed in these homes. In these cases either there are no parents or interested relatives living; or, if living, they offer no hope of ever being able or willing to care for the children properly.

CHILDREN IN FREE PRIVATE HOMES.

	White.		Colored.		Total.
	Male.	Female.	Male.	Female.	
December 31, 1912	127	109	40	14	290
Placed during 1913	29	27	8	16	80
	156	136	48	30	370
Changes during 1913—					
Returned—Unsuited to homes	14	19	2	4	39
Returned—Unsuitable homes	2	2	1	1	6
Transferred to relatives	3	3	......	1	7
Transferred to industrial schools	......	3	5	....	8
Transferred to Rosewood State School	......	2	......	....	2
Transferred to training school	......	....	1	....	1
Became of age	7	8	......	2	17
Legally adopted	2	1	......	....	3
Ran away	1	....	2	....	3
	29	38	11	8	86
December 31, 1913	127	98	37	22	284

The parents of the children committed to the institutions have been encouraged to feel their responsibility for the support of their children, even though taken from them in their improper homes, and to contribute something from their earnings toward the board of the children in the institutions. Reimbursement from this source amounted to $135.

The number of deaths among children on the city's list has been as follows:

	White.	Colored.	Total.
In St. Vincent's Infant Asylum	6	....	6
In Nursery and Child's Hospital	7	....	7
In St. Elizabeth's Home	....	11	11
In boarding home	....	1	1
Total	13	12	25

Eighteen of these were under one year of age, 10 abandoned, 9 being foundlings.

One was over one and under two years of age; one was over two and under three years of age; two were over three and under four years of age; one was over five and under six years of age; one was over six and under seven years of age; one was over ten and under eleven years of age.

The following table shows the death rate of the children under two years of age received during 1913:

	Received under 2 years of age.			Died.		
	Foundlings.	Others.	Total.	Foundlings.	Others.	Total.
St. Vincent's Infant Asylum......	2	7	9	1	3	4
Nursery and Child's Hospital......	4	9	13	3	3	6
St. Elizabeth's Home..............	4	7	11	*4	3	7
Total	10	23	33	8	9	17

*One died in boarding home.

Eighteen children, 5 white and 13 colored, were transferred to industrial schools as follows: 1 to St. Mary's Industrial School, 2 to Maryland School for Girls, 2 to House of Good Shepherd, 6 to House of Reformation for Colored Boys, 2 to House of Good Shepherd for Colored Girls, 5 to Industrial School for Colored Girls.

Fourteen children, 13 white and 1 colored, who were found to need special treatment, were transferrd as follows: 3 to tuberculosis hospitals, 9 to Rosewood State School, 2 to James Lawrence Kernan Hospital and Industrial School for Crippled Children.

Four children, 3 white and 1 colored, were transferred to private agencies and will be cared for without cost to the city, as follows: 1 to St. James' Home, 1 to St. Patrick's Orphan Asylum, 1 to Hebrew Benevolent Society, 1 to St. Augustine School, Raleigh, N. C.

Thirty children, 22 white and 8 colored, became of age.

Three white children in free family homes were legally adopted.

Two thousand one hundred and twenty-three visits were made in order to make careful inquiry into the circumstances and needs of 587 children. This includes visits made to free private homes and to boarding homes.

The children who are under the supervision of the Supervisors of City Charities are distributed as follows:

	White.		Colored.		Total.	Rate of Payment per Day, Cents
	Male.	Female.	Male.	Female.		
With payment of board:						
In St. Vincent's Infant Asylum	12	8	......	....	20	23
In Nursery and Child's Hospital	8	8	......	....	16	23
In St. Elizabeth's Home	......	....	23	32	55	23
In St. Mary's Home	......	....	16	....	16	23
In Maryland Home for Friendless Colored Children	......	....	7	....	7	23
In St. Katharine's Home	......	....	......	12	12	23
In Home of the Friendless	5	3	......	....	8	23
In St. Vincent's Male Orphan Asylum	32	....	......	....	32	25
In St. Mary's Female Orphan Asylum	......	53	......	....	53	27
In St. Joseph's School of Industry	......	13	......	....	13	27
In boarding homes	1	1	......	1	3	43
Without payment of board:	58	86	46	45	235	....
In institutions	17	18	3	1	39	....
In private homes	127	98	37	22	284	....
Total number of children under our care and supervision	202	202	86	68	558	....

As heretofore, in all the destitute children's cases we have endeavored by thorough inquiry to learn first the real needs in each case and then to discover all the resources that could be drawn upon to meet these needs.

THE INSANE DEPARTMENT

Every means is used by the Supervisors to provide care and treatment, as soon as possible, for persons mentally diseased. Prompt treatment is one of the surest means to recovery. While the Supervisors constantly urge upon the State its duty to make more adequate provision for the insane in well-equipped hospitals on extensive grounds, because, as a rule, the State institutions can best care for the insane, we wish to call the attention of the public to the fact that the care and treatment of the insane at Bay View Asylum, which is used at present for many cases, acute as well as chronic, is humane and reasonably efficient, the great need for complete State care is self-evident, not only in the city, but throughout the entire State.

INSANE DEPARTMENT.

Patients were sent to hospitals wholly or in part at the expense of the city as follows:

Hospitals.	White.		Colored.		
	Male.	Female.	Male.	Female.	Total.
City Reception Hospital, Bay View	130	96	57	57	340
Mount Hope Retreat	2	8	......	......	10
Spring Grove	11	24	......	......	35
Springfield	35	33	......	......	68
Crownsville	......	......	2	......	2
	178	161	59	57	455

December 31, 1913, the number of city patients was:

In Mount Hope	240	
In Spring Grove	400	
In Springfield	812	
In Crownsville	20	
		1,481
In City Reception Hospital, Bay View		398
		1,879

This is an increase of one hundred and seventeen, as compared with same date in 1912.

PAYMENTS TO INSANE HOSPITALS FOR 1913.

Spring Grove State Hospital for the Insane, one year, to December 31, inclusive	$37,084 40
Springfield State Hospital for the Insane, one year, to December 31, inclusive	79,200 93
Mount Hope Retreat, one year, to December 31, inclusive	37,441 64
Crownsville State Hospital, one year, to December 31, inclusive	2,382 25
	$156,109 22
Paid to physicians for filling out insanity certificates in special cases	819 00
Entertainment and moving-picture shows at Bay View Asylum	245 80
Transferring patients from one insane hospital to another	147 65
Furniture, pictures, etc., for insane wards at Bay View Asylum	2,521 39
Printing	15 60
Raffia	3 37
	$159,862 03
Balance of appropriation unexpended	11,637 97
	$171,500 00
Received by the city in 1913 from relatives and others for reimbursing patients	$18,209 91

BAY VIEW ASYLUM

Financial Statement for the Year Ending December 31, 1913.

APPROPRIATIONS.

For salaries		$67,118 00
For expenses		155,589 00
Unexpended balance, new service building		57,805 76
Appropriated for installation of fire doors		29,000 00
Appropriated for cow barn		12,500 00
Appropriated for bungalow	$3,500 00	
Received from Contingent Fund	1,624 70	
		5,124 70
Unexpended balance, improvements Ward "A"		3,259 06
Total amount available		$330,396 52

BALANCES UNEXPENDED.

Salaries	$5,837 27	
Installation of fire doors, etc.	16,443 70	
Cow barn	3,389 09	
New improvements, Ward "A"	3,259 06	
Bungalow	55 62	
Total unexpended		28,984 74

AMOUNT OF APPROPRIATION EXPENDED.

Salaries	$61,280 73	
Expenses	155,589 00	
New service building	57,805 76	
Installation of fire doors, etc.	12,556 30	
Cow barn	9,110 91	
Bungalow	5,069 08	
Total expended		$301,411 78

RECEIPTS PAID CITY COMPTROLLER.

Board of inmates, collected by superintendent	$541 90	
Board of inmates, collected by Supervisors	1,110 56	
From sale of old material	156 13	
		1,808 59
Net amount expended		$299,603 19

VALUE OF FARM PRODUCTS.

	1913.	1912.
Milk, 21,630 gallons at 18c	$3,893 40	
Eggs, 231 dozen at 24c	55 44	
Salsify, 20 bushels at 75c	15 00	
Celery, 5,301 bunches at 8c	424 08	
Carrots, 20 bushels at 50c	10 00	
Parsnips, 69 bushels at 50c	34 50	
Lettuce, 2,247 heads at 1c	22 47	
Radishes, 1,875 bunches at 1c	18 75	
Rutabagas, 6 bushels at 50c	3 00	
Turnips, 2 wagonloads at $5	10 00	
Parsley, 780 bunches at 1c	7 80	
Cabbage, 4,193 heads at 3c	125 79	
Peas, 5 bushels at 50c	2 50	
Squash, 22 dozen at 20c	4 40	
Beets, 5,354 bunches at 2c	107 08	
Corn, 670 dozen at 12c	80 40	
Tomatoes, 1,404 bushels at 25c	351 00	
String beans, 56 bushels at 60c	33 60	
Lima beans, 41 bushels at 70c	28 70	
Turnips, 63 bushels at 25c	15 75	
Raspberries, 51 quarts at 10c	5 10	
Cucumbers, 3 dozen at 10c	30	
Hay, 45 tons at $18	810 00	
Potatoes, 48 bushels at 50c	24 00	
Wheat, 387 bushels at 90c	348 30	
Oats, 41 bushels at 40c	16 40	
Straw, 18 tons at $8	144 00	
Fodder, 2,000 bundles at 2c	40 00	
Corn, 80 barrels at $3	240 00	
Short corn, 16 barrels at $2	32 00	
Pork, 12,880 pounds at 10c	1,288 00	
Boar, one	25 00	
Beef, 6,920 pounds at $12.40	858 08	
Cow hides, twelve	69 60	
Total value of farm products	$9,144 44	$10,030 36

EXPENSES.

Salaries and labor	$2,055 56		
Seed and implements	250 65		
Fertilizer and lime	156 31		
Sundries, threshing and repairs	336 40		
Hay, feed and straw	2,136 02		
Exchanging and purchasing cows	1,351 90		
Purchasing horses	490 00		
Purchasing boar	26 95		
Cost of producing farm products		6,803 79	8,662 46
Profit		$2,340 65	$1,367 90

STATISTICS BAY VIEW HOSPITAL AND INFIRMARY

TABLE A.

ADMISSIONS, DEATHS, DISCHARGES, ETC.

MONTHS.	Admitted.		Born.		Died.		Discharged.		Escaped.		Eloped.		Remaining	
	1913.	1912.	1913.	1912.	1913.	1912.	1913.	1912.	1913.	1912.	1913.	1912.	1913.	1912.
January	202	257	4	1	59	47	63	75	3	10	4	1	1,628	1,726
February	157	187	......	......	54	44	67	126	21	5	8	9	1,635	1,729
March	153	171	1	......	45	54	157	200	13	18	24	18	1,550	1,610
April	175	136	2	......	53	49	162	157	11	16	9	16	1,492	1,508
May	186	177	1	......	72	51	151	144	18	21	15	14	1,423	1,455
June	157	160	......	2	26	50	104	89	18	15	15	7	1,397	1,456
July	185	179	......	2	41	52	87	230	16	9	9	10	1,429	1,336
August	160	189	......	2	66	36	101	123	11	18	15	4	1,396	1,346
September	145	142	......	......	59	39	99	84	5	12	15	10	1,363	1,343
October	184	186	......	......	38	51	76	66	9	18	14	8	1,410	1,386
November	181	203	1	1	50	59	81	66	12	8	7	13	1,442	1,444
December	273	240	1	......	47	55	66	68	13	4	5	6	1,585	1,551
Totals	2,158	2,227	10	8	630	587	1,214	1,428	150	154	140	116	......	......

TABLE A—*Continued.*

	1913.		1912.	
Population January 1	......	1,551	......	1,601
First admissions during year	1,910	......	1,947	......
Readmissions during the year	248	......	288	......
Born in the institution	10	......	......	......
		2,168		2,235
Total	......	3,719	......	3,836
Total discharges, etc	......	2,134	......	2,285
Remaining at end of year, Dec. 31	......	1,585	......	1,551

SUPPLEMENT TO TABLE A.

Persons Admitted.	Times Admitted.	Total Admissions.
1,711	1	1,711
171	2	342
37	3	111
1	4	4
1,920	....	2,168

TABLE B.

AVERAGE POPULATION BY MONTHS.

MONTHS.	White.			Colored.			Totals.	
	Males.	Females.	Children.	Males.	Females.	Children.	1913.	1912.
January	788	298	15	238	250	4	1,592	1,665
February	808	306	19	242	250	6	1,630	1,725
March	786	312	17	240	245	5	1,607	1,663
April	717	217	14	230	241	5	1,523	1,535
May	679	314	14	208	241	4	1,460	1,487
June	633	313	11	208	233	4	1,402	1,452
July	633	312	11	211	235	3	1,405	1,403
August	634	322	12	214	239	3	1,424	1,328
September	604	317	11	210	232	3	1,377	1,340
October	601	310	11	214	237	3	1,376	1,355
November	643	307	11	220	237	3	1,421	1,410
December	724	307	11	333	245	3	1,523	1,500
Average, 1913	$687^{6}/_{12}$	$311^{3}/_{12}$	$13^{1}/_{12}$	$222^{4}/_{12}$	$240^{5}/_{12}$	$3^{10}/_{12}$	$1{,}478^{4}/_{12}$	....
Average, 1912	$650^{10}/_{12}$	$356^{6}/_{12}$	$17^{6}/_{12}$	$214^{8}/_{12}$	$244^{5}/_{12}$	$5^{2}/_{12}$	....	$1{,}488^{7}/_{12}$

TABLE C.

BIRTHPLACE OF PERSONS ADMITTED.

NATIVES.	1913.
Baltimore	743
Maryland (outside of Baltimore)	365
Connecticut	7
Alabama	3
California	5
Delaware	10
District of Columbia	36
Florida	3
Georgia	8
Illinois	3
Kentucky	6
Louisiana	2
Massachusetts	9
Mississippi	2
Michigan	2
New York	48
New Jersey	8
North Carolina	36
New Hampshire	1
Ohio	12
Pennsylvania	82
Rhode Island	6
South Carolina	13
Tennessee	2
Texas	4
Virginia	190
West Virginia	8
Maine	5
Missouri	2
Vermont	2
Oregon	2
Nebraska	4
Arkansas	1
Unknown	16
Total natives	1,646

FOREIGNERS.	1913.
England	27
Ireland	156
Scotland	7
France	6
Germany	137
Bohemia	9
Austria	33
Russia	60
Poland	17
Sweden	6
Norway	3
Italy	17
Jamaica	5
Hungary	3
Finland	1
Lithunia	3
Roumania	1
Switzerland	2
Canada	7
West Indies	3
Denmark	3
Portugal	3
Greece	6
Newfoundland	1
Spain	2
Gibraltar	1
South Wales	1
Unknown	2
Total foreigners	522
Total natives	1,646
Grand total	2,168

TABLE D.

PERIOD OF RESIDENCE IN BALTIMORE OF PERSONS ADMITTED.

Born in Baltimore	743
Less than one week	34
Over one week and less than one month	60
Over one month and less than three months	28
Over three months and less than six months	30
Over six months and less than one year	34
Over one year and less than two years	48
Over two years	1,191
Total	2,168

TABLE E.

AGES OF PERSONS ADMITTED.

Under 1 year	10
From 1 to 10 years	7
From 11 to 16 years	10
From 17 to 20 years	71
From 21 to 30 years	295
From 31 to 40 years	390
From 41 to 50 years	401
From 51 to 60 years	424
From 61 to 70 years	377
From 71 to 80 years	155
From 81 to 90 years	28
Total	2,168

TABLE F.

Intemperate adults	1,371
Temperate adults	770
Children, habits of parents unknown	27
Total	2,168

TABLE G.

NUMBER OF COMMITMENTS—SEX, COLOR AND PERIOD OF COMMITMENTS.

MONTHS.	SEX.					PERIOD OF COMMITMENT.											
	White Males.	White Females.	Colored Males.	Colored Females.	Totals.	One Week.	Two Weeks.	Three Weeks.	One Month.	Two Months.	Three Months.	Four Months.	Five Months.	Six Months.	Eight Months.	Nine Months.	One Year.
January	10	...	4	2	16	..	..	..	..	8	2	3	..	2	..	..	1
February	10	3	3	3	18	..	..	..	2	13	..	..	..	1	..	..	2
March	7	3	5	...	15	..	2	..	2	8	..	1	..	2	..	..	..
April	9	...	1	...	10	..	..	..	1	5	..	2	..	..	..	..	2
May	12	6	2	...	20	..	1	..	3	13	..	..	..	3	..	..	..
June	9	2	2	...	13	..	1	..	1	6	..	1	..	3	..	..	1
July	11	6	3	1	21	..	..	..	3	13	2	1	..	1	..	..	1
August	14	...	3	...	17	..	..	..	5	8	..	..	..	4	..	..	..
September	13	1	3	1	18	..	..	..	4	10	..	..	..	2	..	..	2
October	17	3	6	1	27	..	2	..	2	14	2	1	..	4	..	..	2
November	5	1	6	...	12	..	2	..	..	7	..	..	..	2	..	..	1
December	17	5	6	...	28	..	1	..	5	17	..	4	..	1	..	..	..
Total, 1913	134	30	44	7	215	..	9	..	28	122	6	13	..	25	..	..	12
Total, 1912	173	42	38	11	264	2	9	1	45	122	12	10	3	46	6	1	7

TABLE H.

NUMBER OF TIMES PERSONS WERE COMMITTED.

1913.	Once.	Twice.	Three Times.	Four Times.	Total.
White males	124	8	1	1	134
White females	25	2	......	......	27
Colored males	45	2	......	......	47
Colored females	7	......	......	......	7
Total persons	201	12	1	1	215
Total commitments	201	24	3	4	232

TABLE I.

BIRTHPLACE OF PERSONS COMMITTED.

NATIVES.	1913.	FOREIGNERS.	1913.
Baltimore	67	England	2
Maryland	29	Scotland	2
Virginia	16	Ireland	25
Pennsylvania	9	Germany	14
District of Columbia	8	Wales	1
North Carolina	7	Nassau	1
Massachusetts	1	Norway	1
Florida	1	Russia	3
Mississippi	1	Austria	2
South Carolina	1	Poland	3
Delaware	2	West Indies	1
Rhode Island	2	Denmark	2
New York	3	Italy	3
Ohio	3	Total foreigners	60
Louisiana	1	Total natives	155
Kentucky	1		
Illinois	1	Grand total	215
Unknown	2		
Total	155		

TABLE J.

AGES OF PERSONS COMMITTED.

1913.	White Males.	White Females.	Colored Males.	Colored Females.
From 16 to 20 years..................	1	....	1	....
From 21 to 30 years..................	10	2	8	1
From 31 to 40 years..................	10	8	6	....
From 41 to 50 years..................	21	5	9	5
From 51 to 60 years..................	30	5	10	....
From 61 to 70 years..................	37	4	10	1
From 71 to 80 years..................	22	2	3	....
From 81 to 90 years..................	3	1	....	....
From 91 to 100 years..................	....	....	....	....
Totals	134	27	47	7

TABLE K.

DEATHS IN EACH MONTH BY SEX AND COLOR.

MONTHS.	White Males.	White Females.	Colored Males.	Colored Females.	Totals.
January	25	8	19	7	59
February	21	10	14	9	54
March	18	3	13	11	45
April	21	9	16	7	53
May	24	8	21	19	72
June	22	6	7	11	46
July	16	4	12	9	41
August	24	12	18	12	66
September	36	9	7	7	59
October	14	12	8	4	38
November	16	14	14	6	50
December	22	13	8	4	47
Total, 1913	259	108	157	106	630
Total, 1912	241	110	135	101	587

TABLE L.

AGES OF PERSONS WHO DIED DURING 1913.

Less than 1 year	4
1 to 10 years	1
11 to 16 years	4
17 to 20 years	16
21 to 30 years	76
31 to 40 years	119
41 to 50 years	111
51 to 60 years	111
61 to 70 years	103
71 to 80 years	63
81 to 90 years	22
Total	630

STATISTICAL REPORT

TABLE I.

Surgical Diseases Treated, January 1 to December 31, 1913.

Diseases Treated.	Principal Diseases.	Complicating Diseases.	Well.	Improved.	Unimproved.	Untreated.	In Hospital.	Died.	Autopsy.
Abortion (threatened)	1	....	1	....	....	....	....	....	....
Abscess:									
Alveolar	1	....	....	1	....	....	....	....	....
Arm	1	....	1	....	....	....	....	....	....
Axillary	2	....	....	2	....	....	....	....	....
Buttocks	1	....	....	....	....	....	1	....	....
Forehead	1	....	1	....	....	....	....	....	....
Perineal	3	....	3	....	....	....	....	....	....
Psoas	....	1	....	....	....	....	....	....	....
Rectal	2	1	....	2	....	....	....	....	....
Scalp	1	....	1	....	....	....	....	....	....
Stitch	1	....	1	....	....	....	....	....	....
Adenitis (suppurative)	1	3	....	1	....	....	....	....	....
Adhesions (intestinal)	6	....	3	2	....	1	....	....	....
Alcoholism:									
Acute	1	1	1	....	....	....	....	....	....
Chronic	....	3	....	....	....	....	....	....	....
Amyloid disease	....	1	....	....	....	....	....	....	....
Anæmia (secondary)	....	1	....	....	....	....	....	....	....
Angina (Ludwig's)	1	....	....	....	....	....	....	1	....
Appendicitis (chronic)	2	2	2	....	....	....	....	....	....
Arterio-sclerosis	....	6	....	....	....	....	....	....	....
Arthritis:									
Chronic	1	....	....	1	....	....	....	....	....
Infective	4	....	2	1	....	....	1	....	....
Asthma (bronchial)	....	1	....	....	....	....	....	....	....
Balano-posthitis	....	1	....	....	....	....	....	....	....
Bronchitis	....	4	....	....	....	....	....	....	....
Burn	1	....	....	1	....	....	....	....	....
Carbuncle	2	....	1	....	....	....	1	....	....
Carcinoma:									
Breast	1	2	....	....	....	....	....	1	....
Colon	1	....	....	....	....	....	....	1	1
Forehead	1	....	....	....	....	....	....	1	....
Jaw	3	....	....	....	....	....	....	3	1
Lip	2	....	....	....	....	....	....	2	1

TABLE I—*Continued.*

SURGICAL DISEASES TREATED, JANUARY 1 TO DECEMBER 31, 1913.

DISEASES TREATED.	Principal Diseases.	Complicating Diseases.	Well.	Improved.	Unimproved.	Untreated.	In Hospital.	Died.	Autopsy.
Esophagus	1						1		
Penis	1		1						
Prostate	1				1				
Rectum	1							1	
Stomach	3							3	2
Tonsils	1							1	1
Uterus	2						1	1	1
Carcinomatosis		1							
Caruncle		1							
Cataract (senile)		1							
Cellulitis	15		9	4			2		
Chancroid	13	1	10	2			1		
Chorea	1		1						
Cirrhosis (liver)	2						1	1	1
Concussion (brain)	1			1					
Conjuncitivitis	2		1			1			
Constipation		1							
Contusion:									
Side	1		1						
Thigh		2							
Corneal ulcer	1		1						
Cystitis:									
Chronic	2	3		2					
Tubercular	1				1				
Cystocele		1							
Cysts:									
Ovary		1							
Sebaceous	1					1			
Delirium tremens	1							1	1
Dementia præcox		1							
Dislocation:									
Elbow	1		1						
Semi-lunar cartilage	1			1					
Shoulder	1	1						1	
Ear:									
Mastoiditis	1			1					
Otitis media	3	1	1	2					
Emphysema		6							
Empyema	4		2	1				1	1
Entero-colitis		1							
Epididymitis:									
Gonococcal	1		1						

TABLE I—*Continued.*

Surgical Diseases Treated, January 1 to December 31, 1913.

Diseases Treated.	Principal Diseases.	Complicating Diseases.	Well.	Improved.	Unimproved.	Untreated.	In Hospital.	Died.	Autopsy.
Infective	2	....	1	....	....	....	1	....	....
Epilepsy (idiopathic)	....	1	....	....	....	....	....	....	....
Epithelioma (eye-lid)	....	1	....	....	....	....	....	....	....
Erysipelas	....	2	....	....	....	....	....	....	....
Fistula:									
Fecal	1	....	....	....	....	....	....	1	1
In ano	4	2	....	3	....	....	1	....	....
Recto-vaginal	....	2	....	....	....	....	....	....	....
Urethral	1	....	....	1	....	....	....	....	....
Vesico-vaginal	....	1	....	....	....	....	....	....	....
Fracture:									
Clavicle	1	....	1	....	....	....	....	....	....
Colles'	3	....	3	....	....	....	....	....	....
Femur (neck)	7	....	....	2	....	1	1	3	....
Humerus	4	....	3	....	....	....	1	....	....
Nose	....	1	....	....	....	....	....	....	....
Radius (shaft)	1	....	....	1	....	....	....	....	....
Rib	3	....	1	2	....	....	....	....	....
Fracture (con.):									
Tibia	3	....	3	....	....	....	....	....	....
Vertebra	1	....	....	1	....	....	....	....	....
Zygoma	....	1	....	....	....	....	....	....	....
Furunculosis	1	....	....	1	....	....	....	....	....
Gangrene:									
Diabetic	2	....	....	2	....	....	....	....	....
Frost-bite	1	....	1	....	....	....	....	....	....
Infective	5	....	1	1	....	....	....	3	....
Raynaud's	2	....	1	1	....	....	....	....	....
Senile	3	....	....	....	....	....	....	3	....
Thrombotic	1	....	....	....	....	....	....	1	....
Gastritis (alcoholic)	1	....	....	1	....	....	....	....	....
Goitre (colloid)	..	1	....	....	....	....	....	....	....
Gonococcal infection:									
Arthritis	1	....	....	1	....	....	....	....	....
Urethritis	4	4	1	2	....	1	....	....	....
Vaginitis	7	3	1	3	....	2	1	....	....
Hemorrhage (cerebral)	2	....	....	....	....	....	....	2	....
Hemorrhoides	5	4	2	1	....	1	1	....	....
Heart:									
Aortic insufficiency	....	2	....	....	....	....	....	....	....
Endocarditis	....	1	....	....	....	....	....	....	....
Mitral insufficiency	2	29	....	....	....	....	....	2	1

TABLE I—*Continued.*

SURGICAL DISEASES TREATED, JANUARY 1 TO DECEMBER 31, 1913.

DISEASES TREATED.	Principal Diseases.	Complicating Diseases.	Well.	Improved.	Unimproved.	Untreated.	In Hospital.	Died.	Autopsy.
Mitral stenosis		5							
Pericarditis	1							1	1
Hemiplegia		5							
Hernia:									
Abdominal	1	2	1						
Femoral		1							
Inguinal	13	14	12				1		
Strangulated (inguinal)	3			1			1	1	
Umbilical	1	3					1		
Hydrocele	2	9	2						
Hydrothorax		1							
Hyperacidity		1							
Hypospadias		1							
Hysteria	2	1		2					
Ileo-colitis	1							1	
Imbecility		2							
Intoxication (intestinal)	1		1						
Iritis		2							
Joints:									
Ankylosis	1			1					
Charcot's		1							
Synovitis	1			1					
Keratitis (interstitial)	1	1				1			
Kidney (floating)	1	1	1						
Laceration:									
Finger	1		1						
Leg	1			1					
Perineal		2							
Lipoma		1							
Lumbago	1			1					
Lymphangitis	2	1	2						
Malingering	1				1				
Nephritis (chronic)	5	6		2		3			
Neuritis (multiple)		2							
Obstruction (intestinal):									
Acute	3		1					2	2
Chronic		2							
Opiumism		2							
Panophthalmitis	1	1	1						
Parotid (tumor)	1				1				

TABLE I—*Continued.*

SURGICAL DISEASES TREATED, JANUARY 1 TO DECEMBER 31, 1913.

DISEASES TREATED.	Principal Diseases.	Complicating Diseases.	Well.	Improved.	Unimproved.	Untreated.	In Hospital.	Died.	Autopsy.
Pelvic inflammatory disease (chronic)	2	3	1	1	....	....	....	....	....
Peritonitis	1	....	1	....	....	....	....	....	....
Phimosis	1	5	1	....	....	....	....	....	....
Pleurisy	....	5	....	....	....	....	....	....	....
Pneumonia (broncho)	3	12	....	....	....	....	....	3	....
Poison—lead (chronic)	....	1	....	....	....	....	....	....	....
Pregnancy	4	2	2	....	....	1	1	....	....
Prostate:									
Hypertrophy	4	....	....	....	....	1	2	1	....
Prostatitis	1	2	....	1	....	....	....	....	....
Ptyalism	1	....	1	....	....	....	....	....	....
Pyelitis	1	....	....	1	....	....	....	....	....
Pyemia	2	....	....	....	....	....	....	2	1
Rectum:									
Proctitis	....	1	....	....	....	....	....	....	....
Rectocele	....	1	....	....	....	....	....	....	....
Stricture	1	....	....	1	....	....	....	....	....
Rhinitis	....	1	....	....	....	....	....	....	....
Salpingitis	....	2	....	....	....	....	....	....	....
Scoliosis	1	1	....	....	....	....	1	....	....
Senility	....	8	....	....	....	....	....	....	....
Sinusitis (chronic)	1	....	....	1	....	....	....	....	....
Skin:									
Erythema multiforme	1	....	....	1	....	....	....	....	....
Lichen planus	....	1	....	....	....	....	....	....	....
Pityriasis rubra	1	....	1	....	....	....	....	....	....
Scabies	1	2	....	....	....	....	1	....	....
Sprain (hip)	1	....	1	....	....	....	....	....	....
Syphilis	....	2	....	....	....	....	....	....	....
Congenital	1	....	....	....	....	....	....	1	1
Periostitis	....	1	....	....	....	....	....	....	....
Primary	3	....	....	1	....	....	2	....	....
Secondary	14	....	1	11	....	....	2	....	....
Spine	2	....	....	....	....	....	2	....	....
Tertiary	23	5	....	18	....	....	5	....	....
Wasserman	2	7	....	1	....	1	....	....	....
Tabes dorsalis	....	1	....	....	....	....	....	....	....
Tonsilitis:									
Acute	....	1	....	....	....	....	....	....	....
Chronic	6	4	3	2	....	....	1	....	....

TABLE I—*Concluded.*

SURGICAL DISEASES TREATED, JANUARY 1 TO DECEMBER 31, 1913.

DISEASES TREATED.	Principal Diseases.	Complicating Diseases.	Well.	Improved.	Unimproved.	Untreated.	In Hospital.	Died.	Autopsy.
Torticolitis (irritative)	....	1	....	....	....	....	....	....	....
Tuberculosis:									
Adenitis	2	1	1	1	....	....	....	....	....
Bone	5	1	....	1	....	2	1	1	....
Enteritis	....	1	....	....	....	....	....	....	....
Epididymitis	....	3	....	....	....	....	....	....	....
Joints	6	1	2	1	....	1	1	1	....
Laryngitis	....	1	....	....	....	....	....	....	....
Peritonitis	6	....	....	3	....	....	1	2	....
Pulmonary	3	29	....	2	....	1	....	....	....
Spine	3	5	....	2	....	....	1	....	....
Testicle	....	3	....	....	....	....	....	....	....
Typhoid	2	....	....	....	....	1	....	1	1
Ulcers:									
Decubitus	2	2	....	....	....	....	1	1	....
Infected	2	2	....	2	....	....	....	....	....
Mal-perforans	....	1	....	....	....	....	....	....	....
Syphilitic	8	2	....	4	....	....	4	....	....
Traumatic	4	....	3	1	....	....	....	....	....
Unclassified	7	....	1	4	....	....	2	....	....
Varicose	9	7	4	2	....	....	3	....	....
Urachus-patent	1	....	....	....	....	....	1	....	....
Urethra:									
Calculus	1	....	....	....	....	....	1	....	....
Rupture	2	....	....	....	....	....	....	2	1
Stricture	2	1	1	1	....	....	....	....	....
Uterus:									
Fibroids	1	1	....	1	....	....	....	....	....
Fibro-myoma	1	....	....	1	....	....	....	....	....
Endometritis	1	....	....	1	....	....	....	....	....
Prolapse	2	1	....	2	....	....	....	....	....
Retro-flexion	....	1	....	....	....	....	....	....	....
Veins:									
Varicocele	....	3	....	....	....	....	....	....	....
Varicose	1	5	....	....	....	....	1	....	....
Wounds:									
Gunshot	1	....	1	....	....	....	....	....	....
Punctured	1	....	1	....	....	....	....	....	....
Total	368	311	112	126	4	20	52	54	19

TABLE II.

OPERATIONS FOR 1913.

Abscess (incision and drainage):	
Arm	1
Axillary	4
Bubo	1
Buttocks	2
Carbuncle	3
Forehead	1
Head	2
Ischio-rectal	2
Liver	1
Neck	1
Perineal	1
Thigh	1
Tubercular	1
Amputation:	
Finger	2
Foot	1
Hand	1
Leg	2
Appendectomy	3
Bunion (excision)	1
Carcinoma (penis)	1
Cataract (removal)	1
Circumcision	13
Craniotomy (exploratory)	1
Curetage	2
Cystoscopic examination	4
Decapsulation of kidney	2
Decompression	1
Dislocation (elbow)	1
Empyema (resection of rib)	3
Enucleation of eye	2
Epididyotomy	1
Fracture:	
Colles'	1
Humerus	3
Radius	1
Fistula (in ano)	3
Gastro-enterostmy (anterior)	1
Hemorrhoidectomy (external)	1
Heel (incision and drainage)	1
Herinotomy:	
Inguinal	11
Strangulated (inguinal)	1
Umbilical	2
Hydrocele	2
Infections:	
Antrium (Highmore)	1
Finger	2
Foot	1
Hand	3
Lacerations:	
Hand	3
Lip and forehead	1
Laparotomies:	
Exploratory	4
Intestinal obstruction	4
Intestinal adhesions	2
Tubercular peritonitis	2
Salpingo-oophorectomy and suspension of uterus	2
Suspension of uterus	1
Lithotomy (vesico-vaginal)	1
Lipoma (excision)	1
Ludwig's angina (incision)	1
Mastoidotomy	1
Meibomion cyst (excision)	1
Nephrorrphophy	1
Pelvic examination (ether)	1
Prostatectomy (supra-pubic)	1
Resection of shoulder	1
Removal of sequestrium from nose	1
Skin grafting	9
Tonsillectomy	2
Urethrotomy:	
Internal	4
External	3
Urachus (incision and drainage)	1
Total	146

TABLE III.

AGE OF PATIENTS IN HOSPITAL DURING THE YEAR 1913.

SURGICAL.

AGE.	White Males.	White Females.	Colored Males.	Colored Females.
1 to 10 years	1	....	....	....
11 to 20 years	4	3	11	12
21 to 30 years	15	21	21	14
31 to 40 years	25	10	11	8
41 to 50 years	33	11	12	8
51 to 60 years	48	11	12	8
61 to 70 years	28	7	4	5
71 to 80 years	16	5	1	....
81 to 90 years	3	2	....	2
91 to 100 years	1	....	....	....
Total	174	70	72	59

Total number of cases, 375.

TABLE IV.

NUMBER OF CASES TREATED IN SURGICAL DISPENSARIES.

(January 1, 1913, to December 31, 1913.)

MONTHS.	Male.	Female.
January	541	163
February	426	152
March	359	127
April	220	148
May	186	142
June	143	136
July	178	122
August	255	127
September	214	63
October	118	73
November	287	102
December	259	86
Total	3,186	1,441
Grand total	4,627	

TABLE V.

Medical Diseases Treated, January 1 to December 31, 1913.

Diseases Treated.	Principal Diseases.	Complicating Diseases.	Well.	Improved.	Unimproved.	Not Treated.	In Hospital.	Died.	Autopsy.
Abscess:									
Alveolar	....	1	....	....	....	....	....	....	....
Pulmonary	1	....	....	....	....	....	....	1	1
Subcutaneous	....	2	....	....	....	....	....	....	....
Acne vulgaris	....	1	....	....	....	....	....	....	....
Acrocyanosis	....	1	....	....	....	....	....	....	....
Acute rheumatic fever	2	....	....	1	....	....	1	....	....
Adenitis	....	1	....	....	....	....	....	....	....
Adhesions:									
Intestinal	....	1	....	....	....	....	....	....	....
Pericardial	....	1	....	....	....	....	....	....	....
Peritoneal	1	3	....	....	....	1	....	....	....
Pleurol	....	1	....	....	....	....	....	....	....
Adiposis dolorosa	1	1	....	1	....	....	....	....	....
Aerophagia	1	....	....	1	....	....	....	....	....
Alcoholism:									
Acute	20	5	10	5	....	....	4	1	....
Chronic	7	6	3	....	....	....	2	2	1
Amyloid disease	....	2	....	....	....	....	....	....	....
Anacidity (gastric)	....	1	....	....	....	....	....	....	....
Anasarca	....	1	....	....	....	....	....	....	....
Anemia:									
Secondary	1	3	....	1	....	....	....	....	....
Pernicious	7	....	....	3	....	....	1	3	2
Aneurism:									
Aortic arch	....	2	....	....	....	....	....	....	....
Innominate	....	1	....	....	....	....	....	....	....
Anthracosis	....	1	....	....	....	....	....	....	....
Aphasis:									
Motor	....	6	....	....	....	....	....	....	....
Sensory	....	1	....	....	....	....	....	....	....
Appendicitis:									
Acute	1	....	....	1	....	....	....	....	....
Chronic	....	1	....	....	....	....	....	....	....
Arterial hypertension	....	2	....	....	....	....	....	....	....
Arterio-sclerosis	7	24	....	2	2	1	....	2	....
Arterio-sclerosis (cerebral)	2	1	....	1	....	1	....	....	....
Arthritis	3	1	3	....	....	....	....	....	....
Acute infectious	....	1	....	....	....	....	....	....	....
Chronic infectious	4	8	....	2	....	....	1	1	....
Deformans	....	1	....	....	....	....	....	....	....
Gonorrhoeal	12	....	5	4	1	1	....	1	....
Ascites	....	2	....	....	....	....	....	....	....

TABLE V—*Continued.*

MEDICAL DISEASES TREATED, JANUARY 1 TO DECEMBER 31, 1913.

DISEASES TREATED.	Principal Diseases.	Complicating Diseases.	Well.	Improved.	Unimproved.	Not Treated.	In Hospital.	Died.	Autopsy.
Asthma:									
Bronchial	2	2	....	....	1	1	....	....	....
Renal	....	1	....	....	....	....	....	....	....
Bronchiectasis	....	2	....	....	....	....	....	....	....
Bronchitis:									
Acute	5	2	2	3	....	....	....	....	....
Chronic	10	16	....	6	1	1	1	1	1
Purulent	....	1	....	....	....	....	....	....	....
Bursitis:									
Prepatellar	....	1	....	....	....	....	....	....	....
Sub-deltoid	....	1	....	....	....	....	....	....	....
Carcinoma:									
Tongue	2	....	....	....	1	....	....	1	1
Jaw	1	....	....	....	....	....	....	1	....
Tonsil	....	....	....	....	....	....	....	....	....
Sub-maxillary gland	....	1	....	....	....	....	....	....	....
Soft palate	....	1	....	....	....	....	....	....	....
Esophagus	1	....	....	....	....	1	....	....	....
Larynx	1	....	....	....	....	....	....	1	1
Thyroid gland	1	....	....	....	....	....	....	1	1
Breast	1	....	....	....	1	....	....	....	....
Stomach	5	....	....	....	3	....	....	2	....
Pancreas	1	....	....	....	....	....	1	....	....
Large intestine	4	....	....	....	1	....	....	3	1
Ovary	1	....	....	....	....	....	1	....	....
Uterus	3	2	....	....	....	....	....	3	1
Carcinomatosis	....	1	....	....	....	....	....	....	....
Cerebro-sclerosis	....	....	....	....	....	....	....	....	....
Cellulitis	5	2	3	1	....	....	....	2	....
Cataract (double)	1	4	....	....	....	....	1	....	....
Chancroid	1	....	....	....	....	1	....	....	....
Charcot's joint	....	1	....	....	....	....	....	....	....
Cholecystitis	2	2	1	1	....	....	....	....	....
Cholelithiasis	3	1	....	....	1	....	1	1	1
Chorea (puerperal)	1	....	1	....	....	....	....	....	....
Cirrhosis of the liver:									
Alcoholic	3	5	....	....	1	....	....	2	1
Syphilitic	1	....	....	....	1	....	....	....	....
Colitis:									
Chronic	2	....	....	1	....	....	....	1	....
Diphtheritic	....	1	....	....	....	....	....	....	....
Ulcerative	2	....	....	....	....	....	....	2	2

TABLE V—*Continued.*

MEDICAL DISEASES TREATED, JANUARY 1 TO DECEMBER 31, 1913.

DISEASES TREATED.	Principal Diseases.	Complicating Diseases.	Well.	Improved.	Unimproved.	Not Treated.	In Hospital.	Died.	Autopsy.
Concussion of the brain...	1	....	....	....	1	....	....	....	....
Conjunctivitis (chronic)...	....	1	....	....	....	....	....	....	....
Constipation:									
Acute	5	....	3	2	....	....	....	....	....
Chronic	2	2	1	1	....	....	....	....	....
Contracture:									
Dupuytren's	....	3	....	....	....	....	....	....	....
Foot and hand..........	....	1	....	....	....	....	....	....	....
Coxavara	1	....	....	....	1	....	....	....	....
Cyst:									
Ovarian	1	2	....	....	1	....	....	....	....
Of urachus..............	1	....	....	....	....	1	....	....	....
Cystitis:									
Acute	1	....	....	1	....	....	....	....	....
Chronic	2	7	....	1	....	....	....	1	1
Deafness:									
Labyrinthine (syphilitic).	1	4	....	....	....	....	1	....	....
Delirium tremens	....	1	....	....	....	....	....	....	....
Dementia:									
Praecox	4	3	....	1	2	1	....	....	....
Senile	2	6	....	....	....	2	....	....	....
Dermatitis medicamentosus.	....	1	....	....	....	....	....	....	....
Diabetes mellitus	2	1	....	....	....	....	1	1	1
Diarrhoea (senile).........	1	....	....	....	....	....	1	....	....
Dysentery (amebic)........	1	....	1	....	....	....	....	....	....
Dysthyroidism	1	....	....	1	....	....	....	....	....
Dystrophia adiposo genitalis.	1	....	....	....	....	....	1	....	....
Eczema:									
Madidans	1	1	....	....	....	....	1	....	....
Seborrheic	....	1	....	....	....	....	....	....	....
Squamosum	1	....	....	....	....	....	1	....	....
Emphysema (pulmonary)..	4	34	....	4	....	....	....	....	....
Empyema (pulmonary)....	1	....	....	....	....	1	....	....	....
Encephalitis (syphilitic)....	....	1	....	....	....	....	....	....	....
Endarteritis:									
Cerebral	....	1	....	....	....	....	....	....	....
Obliterans	1	1	....	....	....	....	....	1	....
Enteritis:									
Acute	7	3	3	....	....	1	....	3	1
Gastro	4	1	1	1	1	1	....	....	....
Tuberculous	....	1	....	....	....	....	....	....	....
Epididymitis	....	1	....	....	....	....	....	....	....

TABLE V—*Continued.*

MEDICAL DISEASES TREATED, JANUARY 1 TO DECEMBER 31, 1913.

DISEASES TREATED.	Principal Diseases.	Complicating Diseases.	Well.	Improved.	Unimproved.	Not Treated.	In Hospital.	Died.	Autopsy.
Erysipelas:									
Face	10	....	8	....	1	....	....	1	....
Leg	....	1	....	....	....	....	....	....	....
Epilepsy:									
Idiopathic	2	....	....	....	1	....	....	1	1
Post operative	....	1	....	....	....	....	....	....	....
Traumatic	....	1	....	....	....	....	....	....	....
Febricula	1	....	1	....	....	....	....	....	....
Fracture:									
Base of skull	1	....	....	....	....	1	....	....	....
Neck of humerus	....	1	....	....	....	....	....	....	....
Furunculosis	....	3	....	....	....	....	....	....	....
Gangrene:									
Senile	....	2	....	....	....	....	....	....	....
Symmetrical	1	1	....	....	1	....	....	....	....
Gastritis (alcoholic)	3	2	3	....	....	....	....	....	....
Gastric:									
Anacidity	....	1	....	....	....	....	....	....	....
Hyperacidity	....	1	....	....	....	....	....	....	....
Hypoacidity	1	....	....	1	....	....	....	....	....
Glycosuria (non-diabetic)	....	1	....	....	....	....	....	....	....
Gonorrhoea:									
Conjunctivitis	1	1	....	1	....	....	....	....	....
Bursitis	....	1	....	....	....	....	....	....	....
Arthritis	12	....	5	4	1	....	1	1	....
Urethritis	2	3	1	1	....	....	....	....	....
Vaginitis	....	1	....	....	....	....	....	....	....
Gout (chronic)	1	....	....	1	....	....	....	....	....
Heat prostration	1	....	....	....	....	....	....	1	....
Heart:									
Adherent pericardium	....	2	....	....	....	....	....	....	....
Acute endocarditis	....	1	....	....	....	....	....	....	....
Acute pericarditis	1	1	....	....	....	....	....	1	1
Acute dilatation	1	2	1	....	....	....	....	....	....
Aortic insufficiency	6	42	....	2	2	....	....	2	1
Aortic stenosis	....	1	....	....	....	....	....	....	....
Mitral insufficiency	16	126	1	8	....	1	....	6	1
Mitral stenosis	10	20	....	3	....	....	7	....	....
Myocardial insufficiency	27	16	....	11	....	....	6	10	2
Hypertrophy of	....	3	....	....	....	....	....	....	....
Aorta, dilatation of	4	5	....	3	....	....	....	1	....

TABLE V—*Continued.*

MEDICAL DISEASES TREATED, JANUARY 1 TO DECEMBER 31, 1913.

DISEASES TREATED.	Principal Diseases.	Complicating Diseases.	Well.	Improved.	Unimproved.	Not Treated.	In Hospital.	Died.	Autopsy.
Hemiplegia:									
Cerebral hemorrhage	33	4	....	3	8	1	3	18	3
Cerebral thrombosis (syphilitic)	14	2	....	8	4	....	....	2	1
Cerebral angiospasm	4	1	....	4	....	....	....	....	....
Residual	3	17	....	1	1	....	1	....	....
Hepatitis (acute)	1	....	....	1	....	....	....	....	....
Hemorrhoids	....	2	....	....	....	....	....	....	....
Hernia:									
Inguinal	....	4	....	....	....	....	....	....	....
Umbilical	....	1	....	....	....	....	....	....	....
Ventral	....	4	....	....	....	....	....	....	....
Herpes zoster	1	....	....	1	....	....	....	....	....
Hydrocele (double)	....	4	....	....	....	....	....	....	....
Hydrothorax	....	7	....	....	....	....	....	....	....
Hysteria	1	1	....	....	....	....	1	....	....
Imbecility	2	5	....	....	....	1	....	1	....
Imbecility (microcephalic).	1	....	....	....	1	....	....	....	....
Influenza..................	4	....	3	1	....	....	....	....	....
Insanity (epileptic)	....	1	....	....	....	....	....	....	....
Intertrigo.................	....	1	....	....	....	....	....	....	....
Intestinal obstruction	4	....	....	1	2	1	....	....	....
Iridoplegia................	....	1	....	....	....	....	....	....	....
Iritis:									
Acute	....	2	....	....	....	....	....	....	....
Syphilitic	....	1	....	....	....	....	....	....	....
Keratitis (syphilitic)	1	....	....	1	....	....	....	....	....
Laryngitis (acute)	1	....	1	....	....	....	....	....	....
Leukæmia (acute meylogenous)	1	....	....	....	....	....	....	1	1
Leukoplakia	....	1	....	....	....	....	....	....	....
Lichen pilaris	1	....	....	1	....	....	....	....	....
Lumbago	1	1	....	....	1	....	....	....	....
Malarial fever:									
Undetermined type	1	1	1	....	....	....	....	....	....
Aestivo-autumnal	1	....	....	....	....	....	....	1	....
Tertian	1	....	1	....	....	....	....	....	....
Malingering	2	2	....	1	1	....	....	....	....
Mastoiditis (acute or chronic?)................	....	1	....	....	....	....	....	....	....

TABLE V—*Continued.*

MEDICAL DISEASES TREATED, JANUARY 1 TO DECEMBER 31, 1913.

DISEASES TREATED.	Principal Diseases.	Complicating Diseases.	Well.	Improved.	Unimproved.	Not Treated.	In Hospital.	Died.	Autopsy.
Meningitis:									
Epidemic	1		1						
Streptococcus		1							
Syphilitic	1							1	1
Undetermined type	1							1	
Mikulicz's disease		4							
Migraine	1			1					
Morphinism	8		3	3			1	1	
Myelitis:									
Compression		2							
Funicular	1				1				
Myositis ossificans		1							
Nephritis:									
Acute	2	3		1				1	
Sub-acute	1			1					
Chronic	23	42		7	2	2	2	10	2
Neuralgia (intercostal)	1		1						
Neurasthenia	6		1	2		1	2		
Neuritis:									
Alcoholic	1	7		1					
Bilateral ulnar		1							
Optic		1							
Obesity		1							
Odema:									
Laryngeal	1			1					
Pulmonary		1							
Optic atrophy		8							
Osteo-chondroma (multiple congenital)	1						1		
Otitis media		3							
Ozena		1							
Panopthalmitis		1							
Papilloma of larynx		1							
Paramycolonus (multiplex)	1	1					1		
Paralysis agitans	1	1			1				
Paralysis:									
Oculomotor		1							
Pseudo-bulbar	1				1				
Paresis:									
General	3				1	1		1	1
Tabo	5				3	2			

TABLE V—*Continued.*

MEDICAL DISEASES TREATED, JANUARY 1 TO DECEMBER 31, 1913.

DISEASES TREATED.	Principal Diseases.	Complicating Diseases.	Well.	Improved.	Unimproved.	Not Treated.	In Hospital.	Died.	Autopsy.
Parasites (intestinal):									
Trichomonas intestinalis.	1	....	....	....	....	....	1	....	....
Pediculosis	1	2	1	....	....	....	....	....	....
Pellagra	5	1	....	1	....	1	....	3	1
Periostitis	....	2	....	....	....	....	....	....	....
Peritonitis:									
Acute	1	2	....	....	1	....	....	....	....
Tuberculous	....	2	....	....	....	....	....	....	....
Pharyngitis:									
Acute	....	1	....	....	....	....	....	....	....
Nasopharyngitis (acute).	1	....	1	....	....	....	....	....	....
Phlebitis	....	1	....	....	....	....	....	....	....
Pleurisy:									
Acute fibrinous	5	4	4	....	....	....	1	....	....
Sero-fibrinous	1	2	....	....	....	....	....	1	1
Chronic adhesive	1	....	....	1	....	....	....	....	....
Thickened pleura	....	2	....	....	....	....	....	....	....
Pleurodynia	....	1	....	....	....	....	....	....	....
Pelvic inflammatory disease.	....	1	....	....	....	....	....	....	....
Pneumonia:									
Broncho	7	19	....	....	....	....	....	7	3
Acute lobar	17	5	5	....	....	....	....	12	5
Tuberculous	1	1	....	....	....	....	....	1	1
Influenzal	....	1	....	....	....	....	....	....	....
Plumbism	2	....	1	1	....	....	....	....	....
Pneumothorax	1	1	....	....	....	....	....	1	1
Pregnancy	....	2	....	....	....	....	....	....	....
Progressive muscular atrophy (bulbar type)	1	....	....	....	....	....	1	....	....
Prostatitis (acute)	....	1	....	....	....	....	....	....	....
Prostatic hypertrophy	1	....	....	....	....	1	....	....	....
Psoriasis	2	....	2	....	....	....	....	....	....
Psychastenia	1	....	....	1	....	....	....	....	....
Psychosis:									
Korsakoff's	....	1	....	....	....	....	....	....	....
Cardiac	....	1	....	....	....	....	....	....	....
Ptyalism	....	1	....	....	....	....	....	....	....
Pyelitis	1	1	....	....	....	1	....	....	....
Pyelonephritis	1	3	....	....	....	....	....	1	....
Purpura	1	....	1	....	....	....	....	....	....
Pyorrhœa alveolaris	1	3	1	....	....	....	....	....	....

TABLE V—*Continued.*

MEDICAL DISEASES TREATED, JANUARY 1 TO DECEMBER 31, 1913.

DISEASES TREATED.	Principal Diseases.	Complicating Diseases.	Well.	Improved.	Unimproved.	Not Treated.	In Hospital.	Died.	Autopsy.
Raynaud's disease	1	....	....	....	....	1	....	....	....
Sacro-iliac disease	1	2	....	1	....	....	....	....	....
Scabies	....	1	....	....	....	....	....	....	....
Sciatica	2	....	....	2	....	....	....	....	....
Scoliosis	....	1	....	....	....	....	....	....	....
Senility	24	18	....	11	2	1	3	7	2
Septicemia:									
Streptococcus	1	1	....	....	....	....	....	1	....
Undetermined type	1	1	....	....	....	....	....	1	....
Singultus	1	....	1	....	....	....	....	....	....
Sinusitis:									
Acute	....	3	....	....	....	....	....	....	....
Chronic	....	2	....	....	....	....	....	....	....
Spinal cord sclerosis:									
Amyotrophic lateral	1	....	....	....	....	....	....	1	....
Lateral syphilitic	4	....	....	2	....	1	1	....	....
Stomatitis (ulcerative)	1	5	1	....	....	....	....	....	....
Stricture:									
Rectum	1	....	....	....	1	....	....	....	....
Urethra	....	1	....	....	....	....	....	....	....
Subluxation of humerus	....	2	....	....	....	....	....	....	....
Syphilis:									
Primary	3	10	1	2	....	....	....	....	....
Secondary	4	....	....	4	....	....	....	....	....
Rupia	....	1	....	....	....	....	....	....	....
Tertiary	16	6	4	8	1	2	....	1	....
Bone pains	1	....	....	....	....	....	1	....	....
Gumma	2	2	....	....	....	....	1	1	....
Labyrinthine deafness	....	3	....	....	....	....	....	....	....
Meningitis	1	....	....	....	....	....	....	1	....
Periostitis	3	....	....	2	....	....	....	1	....
Tabes doralsis	13	3	....	4	6	....	2	1	1
Ulcers	1	2	....	....	....	....	1	....	....
Iritis	....	....	....	....	....	....	....	....	....
Cerebro-spinal	10	5	....	4	2	2	1	1	....
Spinal lateral sclerosis	1	....	....	....	....	....	1	....	....
Positive serum test	4	28	1	2	....	....	1	....	....
Tachycardia	....	1	....	....	....	....	....	....	....
Thrombosis (saphenous)	....	1	....	....	....	....	....	....	....
Tic-irritative	1	....	....	....	1	....	....	....	....

TABLE V—*Concluded.*

MEDICAL DISEASES TREATED, JANUARY 1 TO DECEMBER 31, 1913.

DISEASES TREATED.	Principal Diseases.	Complicating Diseases.	Well.	Improved.	Unimproved.	Not Treated.	In Hospital.	Died.	Autopsy.
Tonsilitis:									
Acute	1	1	1	....	....	....	....	....	....
Chronic	....	4	....	....	....	....	....	....	....
Torticollis	....	1	....	....	....	....	....	....	....
Trauma (right elbow)	....	1	....	....	....	....	....	....	....
Tuberculosis:									
Periostitis	1	....	....	....	1	....	....	....	....
Spine	2	3	....	1	....	....	....	1	1
Miliary	....	1	....	....	....	....	....	....	....
Hip	1	....	....	....	1	....	....	....	....
Pulmonary	60	14	....	1	10	37	....	12	6
Tumor:									
Cerebral	1	....	....	1	....	....	....	....	....
Cerebellar	1	....	....	1	....	....	....	....	....
Hypophyseal	1	....	....	....	....	....	1	....	....
Abdominal	....	1	....	....	....	....	....	....	....
Tympanites	....	1	....	....	....	....	....	....	....
Typhoid fever	28	....	14	....	....	....	6	8	5
Typhoid fever (vaccine reaction)	1	....	....	1	....	....	....	....	....
Ulcer:									
Corneal	1	1	....	....	....	....	1	....	....
Decubitus	....	1	....	....	....	....	....	....	....
Foot	....	1	....	....	....	....	....	....	....
Varicose	....	2	....	....	....	....	....	....	....
Uraemia	2	5	....	....	1	....	....	1	1
Urethritis (non-specific)	....	1	....	....	....	....	....	....	....
Uterus:									
Myofibroma	1	1	....	....	1	....	....	....	....
Prolaspe of	....	1	....	....	....	....	....	....	....
Retroflexion	....	1	....	....	....	....	....	....	....
Varicose veins	....	1	....	....	....	....	....	....	....
Visceroptosis	1	1	....	....	1	....	....	....	....
Nephroptosis	1	7	....	1	....	....	....	....	....
No diagnosis	4	....	1	2	1	....	....	....	....
	672	782	108	175	83	73	69	164	60
Patients counted twice	37	....	5	14	6	2	1	4	2
Total	635	782	103	161	77	71	68	160	58

TABLE VI.

AGE OF PATIENTS IN HOSPITAL DURING YEAR 1913.

MEDICAL.

AGE.	White Males.	White Females.	Colored Males.	Colored Females.
1 to 10 years	....	1	....	....
11 to 20 years	3	5	4	2
21 to 30 years	18	24	10	10
31 to 40 years	47	12	17	10
41 to 50 years	70	17	25	13
51 to 60 years	97	27	27	12
61 to 70 years	70	17	16	10
71 to 80 years	39	11	4	6
81 to 90 years	3	4	....	2
91 to 100 years	....	1	....	1
Total	347	119	103	66

Total number patients, 635.

LABORATORY REPORT.

Wassermann test:	
Blood	684
Spinal fluid	194
Bacteriological cultures:	
Blood	140
Urethra	23
Joint fluid	13
Spinal fluid	18
Throat	7
Abscess	2
Widal	69

TABLE VII.

NUMBER OF CASES TREATED IN THE MEDICAL DISPENSARIES, JANUARY 1 TO DECEMBER 31, 1913.

MONTHS.	Male.	Female.
January	1,864	147
February	1,495	141
March	962	180
April	679	129
May	524	149
June	301	135
July	310	120
August	316	172
September	328	162
October	522	188
November	793	160
December	1,153	158
Totals	*9,247	*1,841

Total of 11,088 cases treated.

*Figures represent the number of individual visits to the dispensary, not separate cases.

CHRONIC HOSPITAL CASES.

White male cases treated during 1913	55
White female cases treated during 1913	43
Total cases	98
White male cases still in hospital	18
White female cases still in hospital	18
Total cases	36

STATISTICS OF THE CITY DETENTION HOSPITAL FOR THE INSANE, BAY VIEW.

TABLE A.

General Statement for the Year Ending December 31, 1913.

	White Males.	White Females.	Colored Males.	Colored Females.	Totals.
Number of patients in hospital, Dec. 31, 1912.....	64	55	74	148	341
Number of patients admitted during year.......	150	94	58	58	360
Total number under treatment.........	....	....	....	....	701
Number of patients discharged...............	30	22	17	18	87
Number of patients paroled and not returned..	8	7	6	5	26
Number of patients transferred to Springfield.	11	12	....	....	23
Number of patients transferred to Spring Grove	56	6	....	....	62
Number of patients transferred to Mt. Hope..	5	4	....	....	9
Number of patients transferred to Crownsville.	....	....	....	....	....
Number of patients escaped..................	5	....	1	1	7
Number of patients died.....................	26	16	17	29	88
Total egress during the year...........	141	67	41	53	302
Remaining in hospital, December 31, 1913.....	74	81	89	155	399
Received twice during the year...............	4	1	2	1	....

TABLE B.

ADMISSIONS, DISCHARGES, TRANSFERS, PAROLES UNRETURNED, ESCAPES, DEATHS AND POPULATION BY MONTHS.

MONTHS.	ADMISSIONS.					Discharges.	Transfers.	Paroles Not Returned.	Escapes.	Deaths.	Population at the End of Each Month.
	White Males.	White Females.	Colored Males.	Colored Females.	Total.						
January	12	9	5	7	33	5	2	3	1	6	358
February	7	7	3	4	21	4	3	1	....	10	362
March	8	7	6	4	25	6	1	1	....	4	374
April	13	11	5	6	35	9	4	1	....	4	391
May	24	8	8	7	47	6	26	....	....	10	395
June	17	7	4	4	32	14	6	3	2	3	401
July	11	6	4	7	28	8	3	5	2	7	405
August	11	10	6	5	32	15	30	1	1	8	381
September	16	6	7	2	31	4	6	4	....	11	386
October	8	11	5	2	26	7	7	3	1	7	388
November	8	4	5	4	21	5	3	3	....	9	388
December	15	8	....	6	29	5	3	1	....	9	399
Totals	150	94	58	58	360	88	94	26	7	88	....

Average population of the department during the year 1913...	383 7/12
Greatest number of patients on any one day (August 12, 1913).	415
Lowest number of patients on any one day (January 3, 1913)..	341

TABLE C.

Nativity of Patients Admitted During the Year 1913.

Natives.	1913.	Foreigners.	1913.
Baltimore	149	Ireland	11
Maryland	71	Germany	18
North Carolina	8	Poland	2
Virginia	34	Russia	12
Ohio	2	Greece	1
New York	2	Italy	3
Alabama	1	Austria	8
West Virginia	2	Bohemia	6
Pennsylvania	10	Denmark	1
Washington, D. C.	4	Jamaica	1
Tennessee	1	England	3
Georgia	1	France	2
South Carolina	1	Hungary	1
Texas	1	Wales	2
Unknown	2	Total foreigners	71
Total natives	289	Total natives	289
		Grand total	360

TABLE D.

Ages of Patients Admitted.

Children born in the institution	3
From 1 to 15 years	1
From 15 to 20 years	14
From 20 to 30 years	75
From 30 to 40 years	89
From 40 to 50 years	66
From 50 to 60 years	46
From 60 to 70 years	37
From 70 to 80 years	21
From 80 to 90 years	7
From 90 to 100 years	1
Total	360

TABLE E.

Occupation of Patients Admitted During the Year 1913.

Baker	1	Mid-wife	1
Bartender	2	Miller	1
Basketmaker	1	Musician	1
Beggar	1	None	20
Blacksmith	3	Nurse	2
Bookkeeper	1	Painter	4
Brakeman	1	Plumber	4
Brassworker	2	Porter	2
Candymaker	1	Printer	4
Canmaker	2	Prostitute	5
Carpenter	6	Rabbi	1
Clerk	4	Restaurant keeper	1
Conductor	1	Salesman	4
Cook	9	Sawyer	1
Domestic	58	Seamstress	6
Druggist	1	Shoemaker	3
Factory worker	6	Soldier	1
Fireman	4	Stationary engineer	1
Hod carrier	1	Stevedore	4
Housework	52	Structural iron worker	1
Janitor	1	Tailor	11
Laborer	94	Tinner	1
Laundress	8	Teamster	6
Machinist	2	Waiter	2
Merchant	4	Waitress	1
		Unknown	6
Total			360

TABLE F.

Showing the Mental Condition of Patients Admitted, Discharged, Transferred and of Those Who Have Died During the Year 1913.

Forms of Insanity.	Admissions.	Discharges and Transfers.					
		Recovered.	Improved.	Unimproved.	Not Insane.	Totals.	Deaths.
Not insane (three births)	4	....	....	....	5	5	1
Toxic -Exhaustive psychoses	13	17	....	....	....	17	6
Dementia praecox and allied forms	78	....	30	43	....	73	7
Manic depressive group	38	16	13	2	....	31	7
Involutional psychoses	11	....	4	2	....	6	1
Senile psychoses	51	....	6	10	....	16	27
Epilepsy	23	....	14	1	....	15	5
Constitutional inferiority	5	....	....	....	....	....	1
Imbecility	22	....	....	11	....	11	2
Idiocy	2	....	....	....	....	....	....
Arterior-sclerotic brain disease	7	....	3	1	....	4	4
Cerebral syphilis	4	1	2	....	....	3	1
General paralysis	53	....	7	16	....	23	24
Acute acoholic hallucinosis	9	9	....	....	....	9	1
Chronic alcoholic hallucinosis	2	1	....	....	....	1	....
Chronic alcoholism	6	3	3	2	....	8	....
Delirium tremens	8	6	....	....	....	6	....
Acute alcoholic intoxication	1	1	....	....	....	1	....
Alcoholic paranoid states	8	4	4	....	....	8	....
Korsakoff's psychoses	2	2	....	....	....	2	....
Drug habitues	3	1	1	2	....	4	....
Other paranoid states	3	....	....	....	....	....	....
Pellagara	1	....	1	....	....	1	1
Unclassified	4	....	....	1	....	1	....
Psychoneuroses	2	....	....	....	....	....	....
Totals	300	61	88	91	5	245	88

TABLE G.

CAUSES OF DEATH.

PRIMARY CAUSE.	IMMEDIATE CAUSE.	NO.
Acute endocarditis		I
Acute parenchymatous nephritis		I
Atrophic cirrhosis liver		I
Cerebral hemorrhage	Infective decubitis	I
Cerebral arterio-sclerosis	Cerebral hemorrhage	5
Cerebral arterio-sclerosis	Delirium	2
Cerebral syphilis	Infective decubitis	I
Chronic myocarditis		2
Chronic parenchymatous nephritis.	Broncho-pneumonia	I
Gastric carcinoma		I
General arterio-sclerosis	Organic heart and kidney disease	3
General paralysis		12
General paralysis	Broncho-pneumonia	3
General paralysis	Lobar pneumonia	3
General paralysis	Pulmonary tuberculosis	2
Lobar pneumonia		I
Ludwig's angina	Ether anaesthesia	I
Manic depressive insanity	Exhaustion	I
Miliary tuberculosis		I
Mitral insufficiency		I
Pellagara	Chronic enterocolitis	I
Pulmonary tuberculosis		IO
Senility	Apoplexy	I
Senility	Broncho-pneumonia	4
Senility	Emphysema and bronchitis	I
Senility	Erysipelas	I
Senility	Chronic endocarditis	I
Senility	Chronic interstitial nephritis	4
Senility	Chronic myocarditis	8
Senility	Lobar pneumonia	2
Senility	Tubercular broncho-pneumonia	I
Serial epilepsy	Cardiac exhaustion	I
Status epilepticua	Cardiac exhaustion	4
Streptococcus septicalmia		I
Suicide		I
Typhoid fever	Acute parotitis	I
Typhoid fever	Intestinal hemorrhage	I
Undifferentiated delirium		I
Total		88

TABLE H.

Time of Treatment of Patients Discharged or Transferred During the Year 1913.

Age.	White Male.	White Female.	Colored Male.	Colored Female.	Total.
Less than 1 month	36	22	8	5	71
1 to 3 months	33	16	8	4	61
3 to 6 months	14	12	4	3	33
6 to 12 months	17	2	1	7	27
1 to 2 years	9	2	1	1	13
2 to 4 years	2	2	1	....	5
4 to 6 years	1	....	....	....	1
6 to 8 years	....	....	....	1	1
8 to 12 years	....	....	....	2	2
Total	112	56	23	23	214

TABLE I.

TIME OF TREATMENT OF PATIENTS WHO DIED DURING THE YEAR 1913.

AGE.	White Male.	White Female.	Colored Male.	Colored Female	Total.
Less than one month	5	6	8	4	23
From 1 to 3 months	4	4	6	5	19
From 3 to 6 months	5	3	5	....	13
From 6 to 12 months	4	1	1	2	8
From 1 to 2 years	4	....	....	1	5
From 2 to 4 years	1	....	1	4	6
From 4 to 6 years	2	1	....	3	6
From 6 to 8 years	....	1	....	1	2
From 8 to 10 years	....	....	....	2	2
From 10 to 12 years	....	....	....	1	1
19 years	1	....	....	....	1
25 years	....	....	....	1	1
27 years	....	....	....	1	1
Total	26	16	21	25	88

TABLE J.

AGE OF PATIENTS WHO DIED DURING THE YEAR 1913.

AGE.	White Male	White Female.	Colored Male.	Colored Female.	Total.
From 15 to 20 years	....	....	....	2	2
From 20 to 30 years	2	1	3	2	8
From 30 to 40 years	5	3	4	4	16
From 40 to 50 years	3	1	2	3	9
From 50 to 60 years	6	4	5	4	19
From 60 to 70 years	5	4	1	10	20
From 70 to 80 years	3	2	....	3	8
From 80 to 90 years	1	1	2	1	5
Unknown	1	....	....	....	1
Total	26	16	17	29	88

OFFICIAL STAFF

Nathaniel G. Grasty	*Secretary*
T. James Hunter	*Visitor-in-Chief*
George Schuster	*Chief Clerk*
Mrs. Emily Duvall	*Clerk and Visitor*
Miss Elizabeth S. Walsh	*Visitor*
Miss Mary O. Simpson	*Visitor*
Mrs. Lura B. Hepburn	*Visitor*
Mrs. Mary Conaway	*Clerk and Stenographer*

MEDICAL AGENCIES

H. D. McCarty, M. D.	*Physician-in-Charge*
Elliott H. Hutchins, M. D.	*Physician-in-Charge*
Gilbert F. Buxton, M. D.	*Physician-in-Charge*
Jennie N. Browne, M. D.	*Assistant Physician*
Mary Cook Willis, M. D.	*Assistant Physician*
Bertha Tapman, M. D.	*Assistant Physician*

BAY VIEW

OFFICIAL STAFF

LAMAR HOLLYDAY	*Superintendent*
DAWSON E. HAMMOND	*Purveyor*
HENRY S JACKSON	*Clerk*
‡JOSEPH A. KANSLER	*Clerk*
JOHN T. MCGUINNESS	*Clerk*
EZRA B. STEIGER	*Clerk*
GUS NEWMAN	*Supervisor*
WILLIAM H. HANSSEN	*Assistant Supervisor*
†WILLIAM OGLE	*Assistant Supervisor*
JAMES FORESTELL	*Assistant Supervisor*
JANE C. COOPER	*Pharmacist*
JAMES J. FARRELL	*Chief Engineer*
CLAUD T. FARLEY	*Assistant Engineer*
LEE E. NORFOLK	*Assistant Engineer*
MARY E. LITTLE	*Matron*
*GERTRUDE STURDEVANT	*Assistant Matron*
CORNELIA HAM	*Assistant Engineer*
*JOHN B. HUNTER	*Farmer*
THOMAS E. MERRYMAN	*Farmer*
THOMAS CONNOR	*Messenger*
MARY MERCER	*Sewing Teacher*
FLORENCE TIERNEY	*Laundress*

---

*Resigned.

†Died.

‡Left without giving notice.

BAY VIEW HOSPITAL

MEDICAL AND SURGICAL STAFF

Physician-in-Chief:

Thomas R. Boggs, M. D.

Surgeon-in-Chief:

Arthur M. Shipley, M. D.

Resident Physicians:

*Roy S. Snowden, M. D.
Lester A. Adams, M. D.

Resident Surgeons:

†Herbert A. D. Coddington, M. D.
Robert B. Patrick, M. D.

Assistant Resident Physicians:

*Jacob Cohen, M. D.
*Trammell Starr, M. D.
*Henry A. Latane, M. D.
*Milton T. Egerton, M. D.
M. C. Pinckoff, M. D.
H. L. Raysor, M. D.
R. R. Spencer, M. D.
C. C. Hinton, M. D.
‡Robert B. Patrick, M. D.
‡Lester A. Adams, M. D.
†Everett A. Sherrill, M. D.
*Roscoe W. Hall, M. D.
P. G. Bean, M. D.
N. J. Gould, M. D.
Linton Gerdine, M. D.
M. L. Richardson, M. D.

Superintendent of Nurses:

Anna C. Turford, R. N.

Consulting Physicians:

Opthalmologist:

James J. Mills, M. D.

Laryngologist:

Frank Dyer Sanger, M. D.

Otologist:

William Tarun.

Neurologist:

Henry M. Thomas, M. D.

Gynecologists:

Edward H. Richardson, M. D.
Hugh W. Brent, M. D.

Urologists:

Gideon M. Timberlake, M. D.
John T. Gerharty, M. D.

Dermatologist:

E. A. Strobel, M. D.

Pediatrician:

John Rurah, M. D.

Pathologist:

Milton C. Winternitz, M. D.

---

*Term of service expired.
†Resigned.
‡Promoted to residents.

TUBERCULOSIS HOSPITAL

Physician-in-Chief:
Gordon Wilson, M. D.

Resident Physician:
*W. Howard Yeager, M. D.
F. F. Callahan, M. D.

Assistant Resident Physicians:
†James H. Murray, M. D.
†Louis Friedman, M. D.
J. Sparck, M. D.
C. N. Neistadt, M. D.
F. J. Wilkens, M. D.

Supervising Nurse:
†May Isabell Heiser.
Maud E. Smith,

---

*Term of service expired.
†Resigned.

RECEPTION HOSPITAL FOR INSANE

Physician-in-Chief:
†Ralph P. Truitt M. D.
Kenneth B. Jones, M. D.

Resident Physicians:
†Kenneth B. Jones, M. D.
John A. Skladowsky, M. D.

Assistant Resident Physicians:
‡John A. Skladowsky, M. D.
B. M. Berngart, M. D.

Supervising Nurse:
Jennie Swarner.

Supervisor:
§Beauregard Beatty.
A. C. Roberts.

Consulting Staff:
Henry J. Berkley, M. D.
Adolf Meyer, M. D.

Others of consulting staff are the same as for the other departments.

---

*Term of service expired.
†Resigned.
‡Promoted to resident physician.
§Resignation requested.

ANNUAL REPORT

OF THE

Superintendent of Public Buildings

TO THE

Mayor and City Council of Baltimore

FOR THE

FISCAL YEAR ENDING DECEMBER 31, 1913

1797

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER

1914

ANNUAL REPORT

OFFICE OF THE

SUPERINTENDENT OF PUBLIC BUILDINGS,

CITY HALL.

BALTIMORE, December 31, 1913.

To the Honorable Mayor and City Council of Baltimore.

GENTLEMEN: I respectfully submit for your consideration my annual report, showing the work performed by this department during the year ending December 31, 1913.

During the past year I have endeavored to place the several buildings under my supervision in the best possible condition so far as the appropriation at my command would permit.

THE YEAR'S SUCCESSES.

During the year several matters of unexpected expenses were saddled upon the department, not one of which could have been foreseen and calculated into the year's requisitions; and yet, by careful management and strict economy, making every dollar produce a full dollar's worth, the department has served and provided everything that seemed to be needed for the various municipal departments.

SPECIAL RECOMMENDATIONS.

There are one or two additions which should be made to the list of employes, which a close examination will demonstrate to be wise and business like.

For instance: The number of watchmen in the City Hall should be increased from four to five. There should be two watchmen in the hall at night and three during the day, in order to give the building proper protection. It is hardly possible for one man to make frequent rounds through the building at night and at the same time keep proper watch at the Holliday street door; that door must be kept open until after midnight. The corridors and several of the rooms should be painted and frescoed.

A general overhauling of the several toilet rooms is needed, as they are far from sanitary.

The elevator of the City Hall should be supplied with greater power.

A public toilet on the first floor is urgent.

Detail of the Year's Work.

The following improvements were made during the year:

City Hall.

I beg to report that the corridor walls on all the floors have been properly washed; all the furniture and floor coverings have been renovated and repaired, and are now in first-class condition.

The Star-Spangled Banner Commission's offices were entirely furnished with new office furniture, linoleum and the walls painted.

The City Forester's office was furnished and painted.

City Hall Annexes.

Annex No. 1—Occupied by the Health Department and Bay View offices, is in a clean and comfortable condition, but by no means attractive in either interior or exterior appearance.

Annex No. 2—Occupied by the Street Cleaning Commissioner, Electric and Free Public Bath Commission, also Topographical Survey, has been thoroughly overhauled and renovated.

These buildings are now lighted by current furnished from the High Pressure Pumping Station.

Court House.

The general condition of this building is good. One unfortunate condition is that several of the departments, under the law, employ their own charwomen, but are not allowed a sufficient number to do the work properly. I have no jurisdiction over the cleaning in these departments, though this fact is not generally known, and I frequently receive censure for what I am not responsible.

The four elevators in the building, and the electrical machinery by which they are run, have been overhauled during the year and are in first-class condition.

This building is now lighted and heated by current furnished from the High Pressure Pumping Station, which is very economical and satisfactory in every respect.

People's Court.

The general condition of this building is good, except the walls, which need painting.

The corridors and two rooms have been covered with linoleum; nine windows furnished with awnings; four fire extinguishers purchased and placed on the walls to be handy in case of fire.

FINANCIAL STATEMENT.

The cost of maintaining the department for the year ending December 31, 1913, was as follows:

Total appropriation for the year 1913		$82,104 41
City Hall, salaries	$17,622 50	
City Hall Annexes, salaries	6,120 00	
Court House, salaries	32,940 00	
People's Court, salaries	2,880 00	
City Hall, expenses	6,200 00	
City Hall Annexes, expenses	7,250 00	
Court House, expenses	6,429 41	
People's Court, expenses	2,625 00	
Total expenditures for the year		82,066 91
Balance		$37 50

CONCLUSION.

In conclusion, I desire to state that in all the improvements inaugurated by this department I have had the hearty support and earnest co-operation of Mr. Clarence E. Stubbs, the Building Inspector, and his able assistants.

Respectfully submitted,

GEO. T. AMES,
Superintendent of Public Buildings.

COMPLIMENTS OF . . .

ROBERT J. McCUEN

SUPT. OF LAMPS AND LIGHTING

ANNUAL REPORT

OF THE

SUPERINTENDENT OF LAMPS AND LIGHTING

TO THE

Mayor and City Council of Baltimore

FOR THE

FISCAL YEAR ENDING DECEMBER 31, 1913

1797

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER
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RULES FOR THE GOVERNMENT OF EMPLOYEES OF THIS DEPARTMENT

1. District Superintendents will patrol the district to which each may be assigned, night and morning, and maintain a thorough and practical supervision over the street lighting system of the city, in order that the very best service may be obtained at all times. They must report all defective street lights in their respective districts and fully explain in their reports the cause of such defects.

2. They must see that the lanterns, globes, bottom glass, street signs and other lamp fixtures are properly adjusted and are kept thoroughly cleaned at all times, and must report any failure on the part of the contractors or their employees to properly perform this work.

3. They must see that the street lamps are lighted each night and extinguished each morning strictly in accordance with the official schedule of lighting issued by this Department, and report any failure of the lamplighters to comply with this requirement.

4. They must thoroughly acquaint themselves with each and every condition in their respective districts bearing upon the work of this Department, in connection with the lighting service, and must make such recommendations as in their judgment will improve the street lighting system.

5. They must keep an accurate account of the number and location of all gas and naphtha street lamps and unused lamp posts in their respective districts, and be prepared to furnish the Superintendent of Lamps and Lighting information as to the exact location of each lamp and unused lamp post.

6. When new street lamps are ordered by the Superintendent of Lamps and Lighting, the District Superintendents must see that they are placed in the exact location as ordered, and that the pavement at the base of each post is put in proper condition and report in writing to the Department when these lamps go into service. Lamps should not be placed against trees, telegraph or telephone poles.

7. They must keep an accurate account of all street lighting equipment, and must specify that portion of it that belongs to the city and

that owned by the contractors. They must report to the Department all broken or wrecked lamp posts and fixtures found in their respective districts, and see that all needed repairs are promptly made by the contractors, including the repair of the pavement at the base of all posts.

8. They must see that all the street signs which are attached to houses in the electric light districts of the city are properly adjusted, and must report to the Department any such signs that may be found hanging or out of place—giving the location where such signs are to be found.

They must report to the Department the necessity for street signs in such localities of their respective districts, where, in their judgment, the convenience of the public may demand, and must specify whether for street lamps, houses or unused lamp posts, giving the location where such signs are to be placed.

9. The District Superintendents will be required to make a lamp-to-lamp inspection every three months during the year, and must report all defects found and all repairs needed.

The method of this inspection must be conducted in the day time, and with the assistance of the lamplighters.

The District Superintendents, with the assistance of the lamplighters, will examine, in the most thorough manner, each street lamp, and must carefully note and report every defect found in connection with the lantern, burner and lamp post. They must note and report every lamp post found to be leaning, and report any defects found in the pavement at the base of each lamp post. They must also report the necessity for painting the lamp posts and fixtures.

After this inspection has been made, and the reports, setting forth the necessary repairs to be done, submitted to the Superintendent of Lamps and Lighting, the District Superintendents must follow up this work, and see that all repairs are made by the contractor in a manner satisfactory to the Department.

10. They must acquaint themselves with and keep a correct record of the location of all stores dealing in and selling at retail, coal oil, in their respective districts, and must collect at least three samples of coal oil each day from different dealers. They must also collect samples of oil from the delivery wagons of all companies and persons engaged in selling oil to local dealers.

11. They will be required to take monthly statements or readings of gas and electric meters located in all municipal buildings, markets, etc.

12. Any District Superintendent who may be found guilty of any irregularities in connection with the collection of samples of oil will be promptly dismissed.

13. District Superintendents must report to the Department each morning not later than 9.30 o'clock.

14. Any District Superintendent who fails to comply with these rules in any particular will be dismissed.

INSPECTOR OF ILLUMINATING OIL.

The Inspector of Illuminating Oil will make all inspections of illuminating oil strictly as required by the provisions of the law bearing upon the subject.

He must inspect at least twenty (20) samples of oil daily.

He must keep a correct record of all tests of oil.

He must also perform such other duties as may be ordered from time to time by the Superintendent of Lamps and Lighting.

CHIEF INSPECTOR.

The Chief Inspector must keep a general supervision of the gas, naphtha and electric arc light service throughout the city, ascertain the cause of all defective lights, and where it is within his power to do so he must correct the cause of the trouble; otherwise he must call the contractor's attention to the existing defects that the same may be adjusted promptly.

He must recommend any alterations or repairs of the lamps which he may find to be necessary for the improvement of the general lighting service. He must superintend the erection of all additional electric, gas and naphtha lamps which may be ordered from time to time throughout the city, and also superintend all alterations, repairs and readjustments of such lamps and equipment, and must report to the Department any failure on the part of the contractors or their employees to execute the work properly.

He must perform any other service that may be ordered from time to time by the Superintendent of Lamps and Lighting.

CLERKS.

The clerical force will be required to transact the routine business of the office; enter and keep a correct record of installation, transfer and discontinuance of the various types of lamps in service in the books provided for this purpose and to do such other clerical work as may be ordered by the Superintendent of Lamps and Lighting.

GENERAL RULES FOR THE GOVERNMENT OF ALL EMPLOYEES OF THE DEPARTMENT

1. Any employee of this Department who shall solicit contributions of money or material of any of the contractors doing work for the city through this Department, or from any other person employed by the contractors, either as a loan or otherwise, will be dismissed at once.

2. Any employee found under the influence of liquor, or who may be negligent or insubordinate, or in any way interfering with or obstructing the work of this Department, shall be suspended pending an investigation.

3. Any employee who shall absent himself from work without good and sufficient cause will be dismissed.

4. Any employee who shall fail to comply with any of the rules which apply to his particular work will be dismissed.

5. Employees must not, under any circumstances, entertain visitors or friends during office hours on other than business connected with the Department.

6. Any employee who shall make a misstatement, or who shall falsify his report as to his particular work, will be dismissed.

7. Employees must treat all persons having business with the Department with courtesy, and must conduct themselves with proper decorum at all times.

8. Employees must carefully read the foregoing rules and familiarize themselves with them.

REPORT OF THE SUPERINTENDENT

OFFICE OF
SUPERINTENDENT OF LAMPS AND LIGHTING,
CITY HALL,
BALTIMORE, January 1, 1914.

To the Honorable Mayor and City Council of Baltimore.

GENTLEMEN—I have the honor to submit my annual report for the year ending December 31, 1913—my thirteenth since assuming charge of the Department, and the thirty-third since its establishment.

The amount of work performed during the year has been greater than that done in any preceding year in the history of the Department, due entirely to the increased work of street improvements necessitating the installation and rearrangement of an exceedingly large number of street lamps of all kinds, together with our usual supervision of the work of the street lighting contractors.

The various subjects with which this Department has had to deal during the year are described under the proper headings following.

NUMBER OF STREET LAMPS OF ALL KINDS IN SERVICE.

At the close of the year 1913 there were in service street lamps of all classes as follows:

Incandescent gas lamps	9,319
Incandescent naphtha lamps	324
Incandescent electric lamps (40 candle-power)	901
Incandescent electric lamps (ornamental type)	365
Ornamental luminous arc lamps (underground service)	416
Electric arc lamps (old type underground service)	890
Electric arc lamps (old type overhead service)	1,574
Total number of lamps in service December 31, 1913	13,789

Lamp Equipment—Property Of.

The city owns all the ornamental luminous arc lamps and fixtures comprising the "White Way" districts, the ornamental lamps and fixtures located on the North Baltimore boulevards, gas lamp posts and lanterns, except a number of boulevard lanterns and the patent lamp burners, which are the property of the American Street Lighting Company. All other lamps and fixtures are the property of the several contractors.

Street Lamps—How Maintained.

The street lamps are operated and maintained under contract by private corporations, except the ornamental tungsten lamps located on Charles street, University Parkway and Thirty-ninth street and on the streets surrounding the Western Female High School and the Polytechnic Institute, which lamps are owned by the city and are operated and maintained by this Department direct; the current being supplied by the Gas and Electric Company by meter measurement.

The lamps on the City Hall Plaza are also operated and maintained by this Department; the current being supplied from the High Pressure Pumping Station on South street.

Cost of Maintaining the Street Lamps.

The cost for the maintenance of the street lamps is at the following rates:

Incandescent gas lamps, including the supply of gas, each lamp per annum	$18 10
Incandescent naphtha lamps, each lamp per annum	24 00
Incandescent electric lamps (40 candle-power), each lamp per annum	20 00
Ornamental luminous arc lamps (underground all-night service), each lamp per annum	89 00
Electric arc lamps (old type; underground half-night service), each lamp per annum	81 00
Electric arc lamps (old type; underground all-night service), each lamp per annum	74 00
Electric arc lamps (old type; underground half-night service), each lamp per annum	68 00

Electric arc lamps (old type; overhead service), each lamp per annum	$60 00
Incandescent electric ornamental lamps, sixty (60) candle-power, owned and maintained by the city, each lamp per annum	14 75
Incandescent electric ornamental cluster lamps sixty (60) candle-power, City Hall Plaza, owned and maintained by the city, each lamp per annum (less the supply of current)	7 13

It will be noted that the lamps owned by the city are of a sixty (60) candle-power capacity and are operated and maintained by the city considerably cheaper than are the lamps of forty (40) candle-power capacity which are owned, operated and maintained by the Gas and Electric Company under contract.

The prices of $14.75 and $7.13, respectively, include allowance of five per cent. (5%) for depreciation and five per cent. (5%) interest upon the investment.

Extension of the Street Lighting Service.

During the year there has been installed and placed in service fourteen hundred and sixty-five (1,465) additional lamps of all classes; eight hundred and thirty-five (835) gas lamps erected and connected up, including curb service connections and four hundred and forty-nine (449) subway connections for the accommodation of underground arc lamps—all of which lamps will be set up and placed in service during the year 1914. This work was entirely due to the new paving being done under the several departments having supervision of this character of work.

Extension of the Ornamental Lamp Service.

The "White Way" system of street lighting was extended by the installation of twenty-five luminous arc lamps and ornamental standards on St. Paul street, from the Court House Plaza (Lexington street) to Centre street, a distance of five squares; also on the Fallsway, from Gay street to a point south of Bath street, and at various points on streets in the business section.

An ornamental system of tungsten electric lamps was installed on Lafayette avenue, Madison avenue, McCulloh and Lanvale streets, surrounding the Western Female High School, and a similar system was installed on North avenue, Calvert, Twentieth and Barclay streets surrounding the Polytechnic Institute; also on streets surrounding the Sewerage Pumping Station and the Recreation Pier. These lamps are lighted and extinguished automatically by means of a time-switch, half of these lights being extinguished at midnight and the remainder at dawn. These lamps were installed by the Department at a cost of approximately fifty per cent. (50%) less than by contract.

LAMPS OF ALL CLASSES TRANSFERRED.

Due to the operations of the various municipal departments having to do with all kinds of improvements on the public streets, and for the betterment of the street lighting service, it became necessary during the year to transfer two hundred and forty (240) gas lamps, seventy (70) electric lamps and five (5) naphtha lamps.

LAMPS OF ALL CLASSES DISCONTINUED.

On account of the substitution of one kind of lamp for a different one in order to suit conditions existing at various points throughout the city, and for the accommodation of street improvements in certain sections, one hundred and eighty-two (182) gas lamps, sixty-four (64) electric lamps and eighty-eight (88) naphtha lamps were discontinued from the service during the year.

SUBSTITUTION OF ONE KIND OF LAMP FOR ANOTHER.

The gas mains having been extended in a number of streets in the city proper, as well as in the outlying sections, we have been enabled to substitute thirty-three (33) naphtha lamps for as many gas lamps, and three (3) naphtha lamps for as many

40 candle-power incandescent electric lamps, thus greatly improving the lighting system on the several streets affected by this change at a considerable reduced cost.

Electric Lamps Transferred From Overhead to Underground Service.

The subway conduit system having been extended during the year, fifty (50) arc lamps were transferred from the overhead to the underground service, with the result that an additional number of unsightly poles and overhead wires will be eliminated from the public streets and alleys.

Lamps Placed in Alleys.

The very great and urgent demand on the part of the public for lamps in alleys is evidenced by the fact that one hundred and fifty-five (155) incandescent electric lamps were installed in rear alleys in different sections of the city during the year, in addition to which there are on file in the Department applications for approximately five hundred (500) of these lamps which had to be refused, owing to the limited number allowed for this purpose.

Indeed, it seems that the people are more desirous to have dark alleys lighted than they are the streets, on account of the danger of house-breakers and burglars who, under the cover of darkness existing in these alleys, enter dwellings from the rear for the purpose of robbery.

Playgrounds Lighted.

As usual, a number of playgrounds were properly lighted during the year for the convenience of those who use these grounds for athletic and outdoor exercises.

New Street Signs Erected and Repaired.

The changing of street names, opening of new streets, and the discarding of old and worn out street-name signs—eight hundred and eighty-nine (889) new street signs of all description were erected, thus designating the names of a very large number of streets located in all sections of the city. One hundred and sixty-six (166) bracket and house street-name signs and fixtures were repaired and painted.

"Hospital Zone" Signs Erected.

As required by ordinance, as directed by the Health Commissioner, who furnished plats showing the streets forming hospital zones, forty-three (43) zone signs were installed at proper points designating the outer limits of the several zones selected by the Health Commissioner around the following named hospitals: Baltimore Ear, Eye and Throat; United States Marine, Maryland Homeopathic, St. Vincent's Infant Asylum, and Dr. Howard Kelly's Sanitarium.

Wrecked Gas Lamps.

There were forty-six (46) gas lamps wrecked during the year, due to carts, trucks or heavy wagons having run into these lamps, caused in the main by reckless and indifferent driving. These lamp posts and fixtures were repaired and replaced, as the extent and condition of the damage required, by the contractor, without cost to the city; the new lamps and fixtures, under the terms of the contract, becoming the property of the city. The contractor, however, is permitted to collect from the person or persons who may have been responsible for the damage the actual expenses involved.

Street Lamp Repairs and Alterations of All Kinds.

Street lamps, lanterns and fixtures, which through wear and tear became damaged, have been repaired and alterations made in this equipment from time to time during the year as follows:

Boulevard globes changed to ornamental	281
Miner globes changed to boulevard	233
Miner globes changed to ornamental	33

Lamp domes replaced	113
Lamp draft tubes replaced	99
Lantern repairs	189
Lamp-post repairs	262
Telegraph, telephone and trolley poles transferred for new street lamps	28
Pavement repairs at base of lamp-posts	189

Collecting and Testing Coal Oil.

The work of collecting and testing samples of coal oil, as required by ordinance, was, as usual, done by the force of the Department during the year.

A total of six thousand two hundred and ninety-seven (6,297) samples were tested in the laboratory and in no case was the oil tested found to be below the legal standard and flashing point of 120 degrees Fahrenheit.

Gas and Electric Meter Readings.

As required by ordinance, all gas and electric meters used in all city departments and public places were read by the District Superintendents each month during the year, amounting to 8,136 individual readings. Thus it is made possible to determine the exact and correct quantity of gas and electric current consumed by the city during the year. These readings are recorded each month and are used also to verify the correctness of the bills of the Gas and Electric Company for the supply of gas and electricity.

Night Inspections.

The usual night inspections have been maintained during the year by the District Superintendents for the purpose of keeping a strict supervision over the service to see that the standard of light required by the terms of each contract is maintained during the hours of burning and to report any neglect on the part of the contractors which may result in defective lamp service.

Lamp Posts and Fixtures Painted.

Gas and naphtha lamp posts and fixtures throughout the city to the number of nine thousand five hundred (9,500) were thoroughly overhauled, repaired and painted during the year. This work was done by the American Street Lighting Company, under the terms of the contract, without any cost whatever to the city.

Ornamental Lamp Globes Take Place of Old Type.

The old style of "Boulevard" lamp globes were exchanged for the very latest ornamental design of lamp globes surmounted with neat copper ventilators, and carved cast iron lamp post extensions were placed on all gas lamps located on Broadway, from Baltimore street to North avenue; Eutaw Place, from Dolphin street to North avenue; Read street, from Cathedral to Calvert street; Lombard street, from Chester street to Patterson Park avenue, and on Mount Vernon Square, from Cathedral to St. Paul streets.

This new globe is the very latest type of street lamp fixture, and presents a very neat and artistic appearance, so much so that there is a demand for these globes from citizens in all sections of the city. At present, however, we are placing them on lamps located in the public parked squares.

These new globes and lamp post extensions were furnished and attached to the lamp posts by the American Street Lighting Company without any expense whatever to the City of Baltimore.

New Contracts Awarded.

Electric Street Lighting Service; Electric Current and the Supply of Gas.

New contracts for and in connection with the street lighting service were awarded by the Board of Awards during the year as follows: To the Conoslidated Gas Electric Light and Power Company, for the maintenance of the electric arc and incandescent street lamps of all kinds, for the supply of electric current for use in all municipal buildings and other public places; and for the supply of gas for use in all street gas lamps and in all municipal buildings.

The prices for the several classes of service mentioned above are the same as prevailed under the preceding contracts, except that for the supply of gas for use in the street gas lamps. The price under the new contract is 67½ cents per 1,000 cubic feet, and for use in all municipal buildings the price is 75 cents per 1,000 cubic feet, a reduction, when compared with the prices under the preceding contract, of 2½ cents and 5 cents per 1,000 cubic feet respectively, and a saving to the city of approximately $4,000 per annum. This contract was awarded for a term of one year, beginning September 13, 1913.

Owing to a disagreement between the Gas and Electric Company and the city as to charges for material used in the transfer and alterations of electric lamps, this contract has not as yet been executed. The matter of the differences existing is now under consideration by the Law Department, with a view of a satisfactory adjustment in favor of all concerned. In the meantime, the city is paying for the service at the same prices specified in the company's proposal. This contract was awarded by the Board of Awards, October 1, 1913.

Ornamental Lamp Posts.

A contract was awarded to the Morris Iron and Steel Company of Frederick, Md., for ornamental lamp standards—known as the "Baltimore Post"—by which the cost of the large post is reduced from $36 to $18.95, and the small post from $18 to $9.90, or a saving to the city of approximately fifty per cent. (50%). This contract was awarded for a term of one year, beginning April 4, 1913.

Gas and Naphtha Street Lighting.

A contract was awarded to the American Street Lighting Company for the operation of the gas and naphtha street lamps, at the rate for gas lamps of $9.40 per lamp, a saving of $6,000 per annum. Term of contract three years, beginning December 1, 1913.

Electrical Illumination.

A contract was awarded to Eugene I. Rosenfeld & Co. for a design of special electrical illumination in front of the Fifth Regiment Armory and in front of the Maryland Theatre, for the conventions held by the Baltimore Advertising Club and the Fraternal Order of Eagles.

Electric Lamps or Bulbs.

A contract was awarded to the Baltimore Electric Supply Company for the supply of incandescent electric lamps for use in all municipal buildings. The price for these lamps is somewhat less than under the preceding contract.

CITY BRIDGES.

All city bridges have been equipped with an up-to-date system of electric lighting. St. Paul and Calvert Street Bridges are now being changed from the old gas lighting system to that of the tungsten electric. This work is being done under the supervision of the City Engineer, who has charge of all repairs and alterations in connection with all bridges. When he has completed the work of changing the lighting system on these bridges they will be turned over to this Department for operation and maintenance.

The new scheme of lighting on these bridges will be very artistic and will be a vast improvement over the old plan.

The lamps on all city bridges will be lighted and extinguished automatically by means of a time-switch—half the number of lamps on the St. Paul and Calvert Street bridges being extinguished at midnight and the remainder at daylight.

SPECIAL WORK PLANNED FOR THE YEAR 1914.

The "White Way" system of street lighting will be extended on various prominent streets in the business district now unfinished: on Baltimore street, from Fallsway to Broadway; Broadway, from Baltimore street to the Recreation Pier; Fallsway, from Bath street to Biddle street; Key Highway, from Light street to Montgomery street, and such other streets as may hereafter be decided upon, which will involve the installation of approximately four hundred (400) additional modern luminous arc lamps and ornamental standards and which will make a total of eight hundred (800) of these new lamps and standards.

Tungsten electric lamps with ornamental globes and standards will be installed on Charles street, from North avenue to Twenty-ninth street; Charles street, from University Parkway to the city limits; Oak street, from University Parkway to Mallory lane; Washington street, from North avenue to entrance of Clifton Park; on the several streets surrounding the Eastern Female High School and North Avenue Bridge, from Oak street to McMechen street, which will require the installation of approximately three hundred (300) of this class of lamps which, when installed, will make a total of six hundred.

Locations have been selected and plans laid out for the installation of underground electric lamps on Frederick avenue, from Bentalou street to the city limits; Reisterstown road, from Pennsylvania avenue to Park Heights avenue; Hanover street, from Fayette to Winder streets. Locations have also been selected and plans mapped out for the installation of gas lamps on a large number of streets. All of which work is made necessary by reason of the new paving about to be done by the Paving Commission, the Commissioners for Opening Streets, and the Good Roads Commission.

Approximately fifteen hundred (1,500) gas lamps and three hundred (300) electric arc lamps (old type) will be installed on streets in all sections of the city, which makes a total of twenty-five hundred (2500) lamps of all classes to be installed and placed in service during the year 1914.

This great number of street lamps is made necessary by reason of the improved paving planned for the year 1914, the opening of new streets and the extension of existing streets.

SPECIAL ILLUMINATION.

By direction of the Board of Estimates a special illumination was provided for the benefit of the Baltimore Advertising Club in front of the Fifth Regiment Armory, the Fraternal Order of Eagles in front of the Maryland Theatre, and for the colored Knights of Phythias on Druid Hill avenue, between Eutaw and Paca streets.

Those interested in the several events were much pleased for the consideration thus extended by the city, and were quite profuse in their expressions of appreciation.

The expense for this work was, by order of the Board of Awards, paid out of my appropriation for "Electric Lighting and Maintenance."

BUSINESS OF THE DEPARTMENT CAREFULLY CONDUCTED.

As usual, it has been our endeavor to conduct the affairs of the Department during the year in a careful and conscientious manner and to the very best interests of the city.

The books and accounts of the Department have been examined and audited at stated periods by the Baltimore Audit Company and by the auditors of the Comptroller's Department each month during the year, and have been found correct in every respect.

CONCLUSION.

The usual system of co-operation of all other departments has continued during the past year, with the result that the public business has been disposed of without friction.

I desire to thank His Honor and the several department heads for continued courtesies received, and for willing co-operation given.

I also desire to express my sincere thanks to my office force and to the employees of the Department for earnest, conscientious and faithful service rendered by each of them.

Respectfully submitted,

ROBERT J. MCCUEN,
Superintendent of Lamps and Lighting.

SPECIFICATIONS

For Furnishing, Operating and Maintaining Electric Arc and Incandescent Lamps for Lighting the Streets, Avenues, Parks, Squares, Roads, Bridges, Docks, Piers, Lanes and Alleys Within the City of Baltimore.

Separate bids will be received for lighting the streets, avenues, parks, squares, etc., within the city with electricity under the following conditions:

General.

1. Separate bids must be submitted in sealed envelopes marked "Proposals for Electric Arc and Incandescent Lights," and addressed to the Board of Awards, in care of the City Register, City Hall, Baltimore, Md., not later than 11 o'clock A. M., Wednesday, September 3, 1913.

Contract Terms.

2. Bids must be submitted for terms of one, two, three and five years.

3. Bids must be submitted for all arc and incandescent lamps now in service and such additional lamps that may from time to time be ordered to be installed during the term of the contract by the Superintendent of Lamps and Lighting within the corporate limits of the City of Baltimore.

4. All bids must contain two classifications, one for street lighting service in the underground districts including subway duct rental, and one for street lighting services in overhead districts. The classifications shall be considered together as going to make up one bid and not separately, the intent being to award the electric lighting contract to one contractor.

Certified Check.

5. Each bidder must enclose with his bid his certified check on a clearing house bank for five hundred dollars ($500), made payable to the order of the Mayor and City Council of Baltimore. The check of the successful bidder will be returned after a proper bond has been given for the carrying out of the contract. If the bidder fails to furnish the bond as required by these specifications within ten days after the award is made, the said check shall be forfeited to the City.

Bond.

6. Bond in an amount equal to the contract price will be required upon the award of the contract conditioned for the faithful performance of each and every one of the terms of the contract to be performed by the contractor as herein specified, and the contractor by said bond shall indemnify and hold harmless the Mayor and City Council of Baltimore city against any and all claims, which may be made by reason of any infringement of patent rights in the use of lamps, dynamos or any other article, apparatus or process which may be used in operating or maintaining the lamps under these specifications; and said bond shall also indemnify and hold harmless the Mayor and City Council of Baltimore, its officers, agents or servants, and each and every one of them, against and from suits or actions of every name and description brought against the Mayor and City Council of Baltimore city, or any of its officers, agents or servants, and also from all damages and costs to which it, they or any of them may be put by reason of injury to the person or property of another, resulting from negligence, or carelessness in the performance of its obligations under this contract, or from any failure on the part of the contractor to comply with any or all of the conditions of these specifications.

Whenever the surety or sureties on the bond so furnished shall be deemed by the Mayor to be insufficient or unsatisfactory, the contractor, within ten days after notice to that effect, shall furnish and deliver a new bond to the Mayor and City Council of Baltimore, in the same penalty and on the same conditions, with surety satisfactory to the Mayor, and this duty shall continue on the part of the contractor, whenever and so often as the Mayor shall require a new bond with a satisfactory surety or sureties. If the contractor shall fail to furnish such bond within ten days after said notice mailed to his address, the Mayor and City Council of Baltimore, through its proper agent or agents, may stop all further work under said contract and relet the unfinished work at the expense of the contractor.

The contractor shall give his personal attention constantly to the faithful performance of the work, shall keep the same under his own control and shall not assign, by power of attorney or otherwise, nor sublet the work or any part thereof, without the previous written consent of the Superintendent of Lamps and Lighting. He shall state to the Superintendent of Lamps and Lighting, in writing, the name of such sub-contractor as he intends employing, the portion of the work which he is to do or the material which he is to furnish, his place of business and such other information as the Superintendent of Lamps and Lighting may require, in order to know whether such sub-contractor is reputable and reliable, and able to perform the work or to furnish the material as called for in the specifications.

He shall not, either legally or equitably, assign any of the moneys payable under the contract, or his claim thereto, unless by and with the like consent of the Superintendent of Lamps and Lighting.

Annulment of Contract.

7. If the contractor shall not well and truly observe, perform, fulfill and keep all and singular the covenants and conditions herein mentioned and contained, on his part and behalf to be observed, performed, fulfilled and kept, according to the true intent and meaning of these specifications, then in that case the Superintendent of Lamps and Lighting, with and by the advice and consent of the Mayor, may and shall have the power on the part of the City of Baltimore to declare this contract annulled and vacated, and thereupon it shall become and thenceforth be null and void.

Interpretation of Specifications.

8. As it is the true intent of these specifications to make provisions for obtaining and keeping in service at all times during the existence of this contract the very best and highest standard of electric arc and incandescent street lighting service as it is possible to secure, consistent with the recognized electric standards, it is distinctly understood that any doubt as to the meaning of these specifications and any obscurity in the wording of them will be clarified and interpreted by the Superintendent of Lamps and Lighting, who shall have the right to correct any ambiguity in them when such correction is necessary for the proper fulfillment of their intentions and the object desired, it being understood that no unreasonable construction will be placed upon these specifications different from their intentions, or that will in any manner operate as a burden to the contractor.

9. The Board of Awards reserves the right to reject any or all bids.

Territory to Be Lighted.

10. The territory to be lighted by the contractor under the requirements of these specifications shall be the City of Baltimore, and this territory shall be divided into two classes of districts, to be known as "Underground Districts" and "Overhead Districts," respectively.

Underground and Overhead Districts.

11. For the purpose of these specifications, the "Underground Districts" are defined as those streets, avenues, parks, squares, roads, bridges, docks, piers, lanes and alleys within the City of Baltimore, wherein the city has installed, or does from time to time during the term of this contract, construct systems of conduits, and where poles and overhead wires are eliminated or prohibited by proper order of the Electrical Commission. Lamp locations situated within three hundred (300) feet of the aforesaid underground districts and supplied by cable passing through said underground districts shall be considered to be within said underground districts. The overhead districts, for the purpose of these specifications, are defined as those portions of the City of Baltimore beyond or outside of the limits of the said underground districts and aforesaid lamp locations.

Underground Lamps and Regulations of Electrical Commission.

12. All arc and incandescent lamps located within these "Underground Districts" and such additional arc and incandescent lamps as may be ordered to be installed during the term of this contract shall be supplied by and through underground connections properly established by the contractor in the city conduits, under the supervision and in accordance with the rules, regulations and requirements of the Electrical Commission.

Overhead Lamps Changed to Underground at Contractor's Expense.

13. All arc and incandescent lamps located and in service within the overhead districts and all additional arc and incandescent lamps that may be ordered to be installed during the term of the contract shall be supplied by overhead wires. As the underground districts extend beyond their present boundaries, the contractor shall, at his own expense, except as to conduits, change from overhead to underground service in such extended underground districts, and all arc and incandescent lamps comprised in such change shall, after said change, be paid for by the city at the rate covered by the contract price for the maintenance of arc and incandescent lamps in the underground districts.

All Overhead Lamps to Be Changed to Underground Service as Conduit System Is Extended.

14. All arc and incandescent lamps located in the underground districts shall be served from circuits carried underground in the city conduits, and as said underground districts may be extended from time

to time during the term of this contract. All arc and incandescent lamps located along the line of such extensions of underground districts shall be changed from overhead to underground supply, in accordance with the provisions of these specifications, as soon as practicable after the conduit extensions have been made, and after receipt by the contractor of a proper order for the change. The lateral duct connections to the lamp poles for the proper distances will be made and owned by the City of Baltimore. The cable furnishing the electric service to each and every arc and incandescent lamp within the limits of the underground districts which shall be ready for service when this contract becomes effective, and thereafter furnished during the term of this contract, as said underground districts are from time to time extended, is to be owned and operated by the contractor, together with all appliances and devices necessary for the proper operation of the arc and incandescent lamps located in said underground districts. These specifications and the contract shall apply to and cover all arc lamps located in all the public parks and squares and all additional arc lamps that may be ordered to be installed in such parks and squares during the term of the contract, and is not to include the installation or maintenance of any incandescent lamps for any of the parks It is further conditioned that the contractor, upon the execution of a satisfactory contract, shall pay to the City of Baltimore duct rental at the rate or rates established by the Electrical Commission, in accordance with the lease executed by the contractor with the said Electrical Commission.

Equipment.

15. All labor, apparatus, wooden arc lamp posts (similar to a number of those now in service in the underground districts), mast arms, brackets, cables, wires, conductors, lamps, carbons, fixtures, fittings, connections, and appurtenances of every kind and every description, ordinarily necessary and suitable for the lighting of streets, etc., by electricity, under the requirements of these specifications, shall be furnished by and at the expense of the contractor, and also all electric current and labor of every description for supplying all arc lamps and incandescent lamps with electricity, and also maintenance and repairs of every kind. All construction, supplying of current, carbons, electrodes and globes of suitable quality and all labor necessary for lighting, extinguishing and keeping in repair and for all other purposes, shall be furnished at the expense of the contractor. All cables, wires and conductors of every description used for conveying and distributing the electric current

to all arc and incandescent lamps shall be properly and thoroughly insulated, and shall be placed in such locations and in such manner as will prevent them from being readily tampered with or handled by any unauthorized person or persons.

Type of Lamps.

16. Bids must be submitted on each of the types of arc and incandescent lamps described as follows:

Continuous Current Arc Lamps.

6.6 ampere constant current series enclosed arc type.

6.6 ampere constant current series luminous arc type.

6.6 ampere constant current series luminous arc type, where such lamps and posts are the property of or are purchased by or at the expense of the city.

4.0 ampere constant current series luminous arc type.

Continuous Current Enclosed Type.

Lamps of this type must operate at not less than six and six-tenths (6.6) amperes, and not less than seventy-two (72) volts, measured at the arc, or 75 volts when measured at the terminal or binding posts of the lamps.

Continuous Current Luminous Arc Type, 6.6 Amperes.

Lamps of this type must operate at not less than six and six-tenths (6.6) amperes, and not less than seventy-two (72) volts, measured at the arc, or 75 volts when measured at the terminal or binding posts of the lamps.

Continuous Current Luminous Arc Type, 4 Amperes.

Lamps of this type must operate at not less than four (4) amperes, and not less than seventy-two (72) volts, measured at the arc, or 75 volts when measured at the terminal or binding posts of the lamps.

The specified electric current and voltage for each arc and incandescent lamp must be maintained at each and every lamp in each and every circuit of such lamps. Any electric lamp other than those specified may be substituted at any time by the contractor for those specified, provided it is proved to be equal to the same in illuminating power and effect and in uniformity of operation.

Bids Must State Price for All-Night and Half-Night Service.

17. The bidder must state in his bid the price per arc and incandescent lamp per year for lamps burning *all* night and *every* night, and also for lamps burning for every *half* night during the year, for which he will furnish and light each of said lamps. The contractor must state also the price per arc and incandescent lamp per year including duct rental.

18. The incandescent lamps furnished under these specifications are to be of a standard and approved type, suspended from plain wood posts and plain lamp brackets or goose necks, except as specified in Section 27 of these specifications, and shall be of the best quality, with globe of clear glass of uniform thickness and proper shape to avoid causing rings or streaks of light and shadow. All arc and incandescent lamps that may become broken must be promptly replaced by sound ones, and all arc lamps used under these specifications shall burn with a steady light without undue hissing or flickering, each and every night during the term of this contract.

19. Should the contractor during the term of the contract be furnishing more than one type of arc lamp or incandescent lamp the contractor shall be permitted in the installation of additional lamps to use the one of these types which is suitable to be operated upon the circuit most favorably located or loaded as regards to the location of any additional lamp ordered by the Superintendent of Lamps and Lighting, except under conditions where proper street lighting makes it impossible to comply with this requirement.

Equipment Not to Be Dangerous or Unsightly.

20. Such equipment furnished under these specifications must not be dangerous, unsightly, or such as to incommode the adjoining property unnecessarily, and shall be erected in a manner satisfactory to the Superintendent of Lamps and Lighting.

Change of Lamp Locations and Discontinuance.

21. The transfer of arc and incandescent lamps must be made by the contractor within a reasonable time after the receipt of notice from the Superintendent of Lamps and Lighting, and the actual cost of labor employed in making these changes shall be paid to the contractor by the city. The Superintendent of Lamps and Lighting reserves the right at any time to discontinue the use of any arc or incandescent lamp or lamps that he may deem expedient; provided, however, that the

number of lamps specified as a minimum number to be furnished under these specifications shall not be diminished so long as the contract remains in force, and provided, further, that the total number of arc or incandescent lamps discontinued from service shall not exceed more than twenty-five arc lamps, nor more than twenty-five incandescent lamps in any one year, except in case of an extreme emergency. Lamps discontinued in one location may, however, be offset by lamps ordered at the same time in another location; the new locations being considered as transfers from the discontinued locations. This latter requirement, it is understood and agreed, does not apply to the twenty-five arc lamps and the twenty-five incandescent lamps which the city reserves the right to discontinue from the service, should conditions demand, nor does it apply to any arc lamps which may be discontinued from the service in the parks and squares by the Park Board.

Frosted Globes—Shading.

22. The Superintendent of Lamps and Lighting shall have the right to require the contractor to furnish ground globes or lamp shades for the purpose of shading such house or houses as may be deemed advisable in the judgment of the Superintendent of Lamps and Lighting, which the contractor shall furnish without additional cost.

Incandescent Lamp Renewals by Contractor.

23. Should any of the incandescent lamps furnished under the specifications become blackened, or otherwise reduced in candle power to an amount exceeding twenty per cent. (20%) of their initial candle power, same shall be promptly renewed by the contractor.

Clean Globes.

24. All inclosed arc lamp globes must be cleaned every fourth day. Each inclosed arc lamp shall be supplied with a clear glass, opal or opalescent glass, outer and inner globes, as may be directed by the Superintendent of Lamps and Lighting, and shall also be supplied with a clean glass outer globe.

Painting Lamp Posts.

25. All lamp posts, lamp supports and fixtures for the use of arc or incandescent lamps located in the underground district must be painted two coats of paint in such color as directed by the Superintendent of Lamps and Lighting, and such painting shall be done as

often as necessary to preserve a good appearance. All new lamp posts, lamp supports and fixtures for the use of any additional arc and incandescent lamps that may be ordered to be erected in said underground district may be painted two coats of paint in such color as directed by the Superintendent of Lamps and Lighting, and such painting shall be done as often as necessary to preserve a good appearance. Such painting shall be done at the expense of the contractor, except where applied to posts and fixtures owned or paid for by the city as special equipment.

Special Lamp Posts and Equipment.

26. Any and all special or ornamental lamp posts or other special equipment, including systems of piping and fittings to accommodate the contractors' cables and lamps for bridges and other structures or arc or incandescent lamps required by the Superintendent of Lamps and Lighting and approved by the contractor, shall be completely wired, erected and paid for and properly maintained, except as to lamp repairs and globe renewals, by the contractor and shall, after being paid for, remain the property of the City of Baltimore.

Adjustment of Lamp Equipment.

27. Whenever the Superintendent of Lamps and Lighting shall require that any lamp post or posts furnished by the contractor shall be straightened or set plumb, or that any lamp post or posts or other fixtures be painted or repaired, or that any arc or incandescent lamp be adjusted in such manner as will remove any shadows from the street beds so as to distribute the light to the best advantage in lighting the streets, the same shall be done as soon as practicable after the Superintendent of Lamps and Lighting shall notify the contractor of such requirement.

Removal of Lamps and Equipment.

28. The contractor shall remove any and all lamps, lamp posts, poles and fixtures used, erected and maintained by him exclusively for lighting under these specifications within ninety days after the expiration of this contract, should the Superintendent of Lamps and Lighting so require.

Testing.

29. For the purpose of making tests to determine whether or not the candle-power required by the terms of these specifications is being supplied by the arc and incandescent lamps and of examining apparatus and appliances, it is understood and agreed that the contractor will

furnish to and permit such person or persons as the Superintendent of Lamps and Lighting may authorize, access at all times to all lamps, lamp posts, poles, wires, conduits, fixtures, apparatus and machinery on the street or to any of the stations of the contractor supplying electric current or light under these specifications, and the said Superintendent of Lamps and Lighting shall have the privilege at any and all times when the arc and incandescent lamps are burning of testing any of the city electric light circuits at such point or points as may be selected by the Superintendent of Lamps and Lighting, by the use of such standard measuring instruments as he may desire to use, and any arc or incandescent lamp not found up to the standard of light, as provided by the specifications, will be considered as not burning, and the contractor shall be penalized as herein specified.

Service.

30. The term of this contract shall be from, and the service under this contract shall begin with September 13, 1913.

Number of Lamps at Beginning of Contract.

31. The minimum number of arc lamps, including those in the parks and squares, in service August 1, 1913, to be supplied under these specifications is twenty-nine hundred and seventy-five (2,975) of which number twelve hundred and eight (1,208) are now in the underground districts, and seventeen hundred and sixty-seven (1,767) are now in the overhead districts, including three hundred and eighty-five six and six-tenths (6.6) ampere luminous arc lamps owned by the city, and the contractor shall furnish all necessary equipment for supplying same, except as to poles and lamps ordered by the city as special equipment and except the poles and wires in Druid Hill Park, now the property of the city, but the use of such poles and wires will be granted to the contractor under these specifications without charge. Of the minimum number of lamps the contractor will be permitted to supply 1,308 six and six-tenths (6.6) ampere enclosed arcs and 1,667 four (4) ampere luminous arc lamps. The minimum number of incandescent lamps to be furnished under these specifications is eight hundred and forty-nine (849).

Daily Report of Outage.

32. When the city shall furnish, at its expense, suitable recording ammeters and blank charts therefor, the contractor will be required to supply a recording ammeter chart each morning, showing the perform-

ance of each machine or rectifier used on the circuits on the night previous. The contractor shall each day, before twelve o'clock noon, make a written report to the Superintendent of Lamps and Lighting, stating the number and location of any lamps extinguished or not burning on the preceding night, if any; the time when each lamp was reported extinguished or not burning, and the time the lamp was relighted and started burning; and the said report shall also state the cause for each said lamp being extinguished or failing to burn; and if any of the said lamps are extinguished by reason of the failure of the current to supply said lamps, or for any other reason, his report shall contain a statement of the cause of such failure to supply current.

Monthly Schedule of Lighting and Extinguishing Lamps.

33. On or before the last day of each month the Superintendent of Lamps and Lighting shall furnish to the contractor a schedule showing the time when the arc and incandescent lamps shall start to burn each night of the next ensuing month, and the time when the said arc and incandescent lamps shall be extinguished, which for lamps burning all night and every night during the year, shall be a half hour after sunset to half an hour to sunrise, respectively, in fair weather, and from sunset to sunrise when cloudy, and for lamps burning every half-night during the year, shall be from a half hour after sunset to midnight. The burning hours for each lamp under these specifications shall not exceed a total of four thousand (4,000) hours, annually, for lamps burning all night and every night, and two thousand (2,000) hours, annually, for lamps burning every half night during the year.

Voltage and Candle-Power.

34. The contractor is to maintain service at the current voltage and candle-power characteristics specified herein, subject to the provisions of Section Seventeen (17) herein, during the entire time provided in the said schedule, and all electric lamps shall burn at standard operating condition during the said time.

Contractor's Responsibility.

35. Any approval given by the Superintendent of Lamps and Lighting of any arc or incandescent lamps or equipment, provided under these specifications, or of any locations, shall not relieve the contractor of any responsibility in case of accident or injury to person or property.

Fines for Outages and Defective Service.

36. The contractor shall use due diligence in providing a regular uninterrupted supply of current during the time specified herein. Should the supply of current or the service under these specifications be interrupted or be defective, or fail as a result of the company's negligence, the Superintendent of Lamps and Lighting may deduct one night's pay for every arc or incandescent lamp not up to the standard provided herein, or for any arc or incandescent lamps upon a circuit not up to the standard, and two night's pay for every arc or incandescent lamp which the contractor shall fail to light during the entire night; provided that the Superintendent of Lamps and Lighting may, if the circumstances fairly warrant it, decide that a less reduction be made, and remit any part of the penalty imposed by this section, and should any arc or incandescent lamp or lamps be extinguished or not lighted during the time provided in the said schedule, through the fault or negligence of the contractor, and during the period of thirty minutes consecutively, the said Superintendent of Lamps and Lighting may deduct from the bills of the contractor half the amount which the contractor would be entitled to receive if such arc or incandescent lamp or lamps had been lighted during the whole night, and for each and every arc or incandescent lamp which shall be extinguished or not lighted for sixty minutes consecutively, the Superintendent of Lamps and Lighting may deduct the full amount which the contractor would be entitled to receive if such arc or incandescent lamp or lamps had been lighted the whole night, which deductions are hereby agreed upon, fixed and determined as liquidated damages which the contractor will suffer by reason of such lamps being extinguished or not lighted, or defective, as aforesaid, and not by way of penalty.

Any half-night lamp found to be out or not burning, or defective in any manner described hereinbefore, shall subject the contractor to half the amount of each fine stipulated in this paragraph for all night and every night lamp which may be found to be out or defective as set forth above.

Whenever and as often as any lamps supplied under these specifications shall cease or fail to burn, the contractor shall use due diligence to relight the same as soon as practicable and keep said lamps burning for the remainder of the night, even though under the terms of these specifications the contractor is to receive no pay for the said lamps for that night by reason of same having been out for one hour during the said night.

City to Light in an Emergency at Contractor's Expense.

37. Any failure on the part of the contractor to light the lamps, as required by the terms of these specifications, to such an extent as to require the city to provide any other, or a similar character of light, which may be necessary to meet the conditions that exist as a result of such failure to light the city streets, the additional expense of all such emergency lighting shall be charged to the contractor under this contract, and the contractor will be held solely responsible and liable for any damages for injury to any person or persons which may be due to the contractor's failure to light the streets as required by these specifications.

Defective Lamps to Be Changed.

38. Lamps not burning in a manner satisfactory to the Superintendent of Lamps and Lighting or his representatives shall be changed or adjusted, and proper lamps substituted within twelve hours after notice has been given by the Superintendent of Lamps and Lighting or his representatives that the lamps referred to do not burn satisfactorily or in accordance with the specifications.

39. No service whatever, other than that contracted for by the city and maintained on the city circuits, shall be supplied from the circuits giving current to the city lamps under these specifications, unless such service shall be approved in writing by the Superintendent of Lamps and Lighting.

System of Patrol Required.

40. The contractor must maintain, at his own expense, an efficient system of patrol for inspecting the arc and incandescent lamps during the hours of burning, so that any arc or incandescent lamp which fails to burn properly shall be promptly reported and put in order, or immediately replaced with a sound lamp. It is understood by the contractor that the utmost diligence shall be used in order that the streets, avenues, lanes, alleys, etc., shall be properly and efficiently lighted, and to this end a sufficient number of men shall be employed as inspectors by the contractor, so that each arc or incandescent lamp may be visited and examined at least three times each night.

The contractor will be required to arrange a schedule of passing points for his patrolmen in order that the inspectors of the lighting department can get in touch with them, when occasion requires, with the least possible delay.

Safety Appliances.

41. All safety appliances known to the best electrical practice shall be used throughout the system authorized directly or indirectly by this contract.

Circuit List of Lamps When Required.

42. The contractor shall furnish to the Superintendent of Lamps and Lighting, within five days of his request, the number and geographical location of each lamp on each circuit, and shall also specify the order in which the lamps are located on the circuit.

Payments.

43. It is further specified that on or before the fifth day of each and every month during the term of this contract the contractor shall make a statement to the satisfaction of the Superintendent of Lamps and Lighting that the said contractor has fully performed and fulfilled this contract in all particulars and conditions aforesaid during the preceding month.

The contractor will be paid by the city for the electric service supplied by said contractor at the contract price, on or before the fifteenth of each month, adjusted according to the number of street lamps in actual use.

Attention is called to Chapter 85 of the Acts of 1908.

(Signed) ROBERT J. McCUEN,
Superintendent of Lamps and Lighting.

Approved:

(Signed) JAMES H. PRESTON,
President Board of Awards.

(Signed) S. S. FIELD,
City Solicitor.

NOTE—The contract for furnishing, operating and maintaining electric arc and incandescent lamps was awarded to the Consolidated Gas Electric Light and Power Company on October 1, 1913, for a term of one (1) year, beginning September 13, 1913.

Owing to a disagreement between the Gas and Electric Company and the City as to charges for material used in the transfer and alterations of electric lamps, this contract and bond has not as yet been executed. The matter of the differences existing is now under consideration by the Law Department, with a view of a satisfactory adjustment in favor of all concerned. In the meantime the city is paying for the service at the same prices specified in the Company's proposal, of which the following is an extract, and which prices are the same as prevailed under the old contract.

Ornamental luminous arc lamps (underground all-night service), each lamp per annum	$89 00
Ornamental luminous arc lamps (underground half-night service), each lamp per annum	81 00
Electric arc lamps (old type; underground all-night service), each lamp per annum	74 00
Electric arc lamp (old type; underground half-night service), each lamp per annum	68 00
Electric arc lamps (old type; overhead service), each lamp per annum	60 00
Incandescent electric lamps (40 candle-power; overhead all-night service), each lamp per annum	20 00
Incandescent electric lamps (40 candle-power; underground all-night service), each lamp per annum	36 00

SPECIFICATIONS

For Furnishing Incandescent Electric Current.

1. Bids will be received for furnishing incandescent electric current for use in the public buildings of every kind and description owned by the City of Baltimore, in which buildings such current is now being used and in all other public buildings in which electric current may be used in the future; also in squares, streets, avenues, alleys of the city, and in any other property of the city where the use of such current may become necessary.

2. Bids must be submitted in sealed envelopes, marked "Proposal for Furnishing Electric Current for Use in the Public Buildings Within the City of Baltimore and in Squares, Streets, Avenues and Alleys of the City," and addressed to the Board of Awards, in care of Richard Gwinn, City Register, City Hall, Baltimore, Maryland, not later than 11 o'clock A. M., Wednesday, September 3, 1913.

3. Bids must be submitted for a term of one, two, three and five years; service to each and every building and to the squares, streets, avenues, alleys of the city and in any other property of the city to begin as soon as practicable after the award of the contract.

4. The Board of Awards reserves the right to reject any and all bids.

Certified Check.

5. Each bidder must enclose with his bid his certified check for five hundred ($500) dollars on a clearing house bank, made payable to the order of the Mayor and City Council of Baltimore. The check of the successful bidder will be returned after the execution of the contract and after a proper bond has been given for the faithful performance of the contract. If the bidder fails to furnish the bond as required by these specifications within ten (10) days after the award is made, the said check shall be forfeited to the city.

Bond.

6. The successful bidder will be required to give bond in the amount of the contract price, conditioned that he shall comply in all respects with the terms and conditions of the contract, and his obligations thereunder, including the specifications, and shall indemnify and save harmless the Mayor and City Council of Baltimore against or from all costs, expense, damages, injury or loss to which the

said Mayor and City Council of Baltimore may be subjected by reason of any wrongdoing, misconduct, want of care or skill, negligence or default upon the part of the contractor, his agents or employees in or about the execution or performance of the contract, including said specifications, and shall save and keep harmless said Mayor and City Council of Baltimore against and from all claims or losses to it from any cause whatever, including patent infringements in the matter of furnishing said work and supplies.

Whenever the surety or sureties on the bond so furnished shall be deemed by the Mayor to be insufficient or unsatisfactory, the contractor, within ten days after notice to that effect, shall furnish and deliver a new bond to the Mayor and City Council of Baltimore, in the same penalty and on the same conditions, with surety satisfactory to the Mayor, and this duty shall continue on the part of the contractor whenever, and so often as, the Mayor shall require a new bond, with a satisfactory surety or sureties. If the contractor shall fail to furnish such bond within ten days after said notice mailed to his address, the Mayor and City Council of Baltimore, through its proper agent or agents, may stop all further work under said contract and relet the unfinished work at the expense of the contractor.

The contractor shall give his personal attention constantly to the faithful performance of the work, shall keep the same under his own control, and shall not assign, by power of attorney or otherwise, nor sublet the work or any part thereof, without the previous written consent of the Superintendent of Lamps and Lighting. He shall state to the Superintendent of Lamps and Lighting, in writing, the name of such sub-contractor as he intends employing, the portion of the work which he is to do or the material which he is to furnish, his place of business and such other information as the Superintendent of Lamps and Lighting may require, in order to know whether such sub-contractor is reputable and reliable and able to perform the work or to furnish the material as called for in the specifications.

He shall not, either legally or equitably, assign any of the moneys payable under the contract, or his claim thereto, unless by and with the like consent of the Superintendent of Lamps and Lighting.

7. Bidders must agree to supply incandescent electric current continuously for the twenty-four hours of each and every day during the term of the contract.

The city is to furnish and maintain all equipment from the point of connection by the contractor, which shall be the building line of any building or other structure in which electric current may be used.

except the meter or other device which may be installed for the benefit of the contractor.

8. In case of any instance wherein it may be or may become necessary for the contractor to install a transformer, frequency changer, rotary converter, motor generator or other translating apparatus in order to supply such incandescent electric current as may be required by the city, such device must be connected ahead of the meter, which is intended to measure the rectified current, and said meter is only to record the electric current used by the city after having been transformed or rectified.

9. The contractor must supply one meter for each installation, except in cases where more than one department occupies a building; then a meter must be connected to the wiring in each department, if it is so required.

10. Bids must be submitted for a price per kilowatt hour, with discounts, if any, for quantity consumed by meter measurement.

11. Bids must be submitted for current at a price per kilowatt hour, less free renewal of lamps.

12. Bidders must submit a price per kilowatt hour, based on a monthly lump consumption of approximately 65,000 kilowatt hours per month by the combined installations throughout the city.

(Signed) ROBERT J. McCUEN,
Superintendent of Lamps and Lighting

Approved:

(Signed) JAMES H. PRESTON,
President Board of Awards.

(Signed) S. S. FIELD,
City Solicitor.

The contract and bond for incandescent electric current is not yet executed. The matter is in the hands of the City Solicitor for adjustment, together with the contract for electric arc and incandescent lighting. The contract was awarded October 1, 1913. The prices, however, are the same as prevailed under the previous contract, and pending a settlement, the city is paying the same rates proposed by the Company, viz.:

Without Free Renewals of Lamps.

For the first twenty thousand (20,000) kilowatt hours per month, 5.66 cents per kilowatt hour.

For the next twenty thousand (20,000) kilowatt hours per month, 4.66 cents per kilowatt hour.

For all over forty thousand (40,000) kilowatt hours per month, 3.66 cents per kilowatt hour.

For a consumption of fifteen thousand (15,000) kilowatt hours or more in any one location, or for any one service, the consumption in such location being considered separately and not as in any way forming a part of the general consumption in other city buildings; that is to say, such consumption shall not be included in the total consumption of city buildings for the purpose of determining the rates to be paid for such total consumption, the price shall be:

Without free renewals of lamps, 3 cents per kilowatt hour.

NOTICE TO BIDDERS

BALTIMORE, August 13, 1913.

The City of Baltimore invites bids for mantle gas and naphtha street lighting fixtures and maintenance for such public streets, avenues, lanes, alleys, parks, squares and bridges as may, from time to time, be designated by the Superintendent of Lamps and Lighting during the term of the contract, from December 1, 1913, in accordance with the requirements contained in the attached specifications.

Bids are to be based on furnishing approximately 9,072 gas lamps and 300 naphtha lamps, in service on August 1, 1913.

The city will furnish the posts and the supply of gas for the gas lamps.

Bidders will be required to estimate for furnishing all the lamp fixtures, including the posts and lanterns and the supply of gasoline, necessary for operating the mantle naphtha lamps.

An alternate proposal for naphtha lamps, the city to furnish the posts.

Bidders will be required to include and estimate for the labor necessary to operate and maintain the mantle street lighting system.

Bidders will be required to submit two propositions, one for gas lighting and one for naphtha lighting, as set forth in Sections 1 and 2 of specifications, the two propositions going to make up one bid and to be awarded to one contractor. Bidders will also be required to sumbit a proposal for furnishing, operating and maintaining (per annum) mantle gas lamps in groups of two burners to be attached to one lamp post or standard.

Bids must be enclosed in sealed envelopes and marked, "Proposals for Gas and Naphtha Street Lamp Fixtures and Maintenance," and addressed to the Board of Awards, in care of Richard Gwinn, City Register, City Hall, Baltimore, Maryland, not later than 11 o'clock A. M., Wednesday, September 3, 1913.

A certified check of the bidder on a clearing house bank for two thousand dollars ($2,000), made payable to the order of the Mayor and City Council of Baltimore, must accompany each bid; said check to be forfeited to the city if, at the expiration of ten days after the award of the contract has been made, the contractor fails to execute said contract.

Bidders will be required to estimate for the labor necessary to operate the lamps and to keep the lamps in thorough repair.

Samples of the burners and the equipment to be furnished must be exhibited on the street at least three days prior to opening the bids.

The Board of Awards reserves the right to reject any or all bids.

(Signed) **ROBERT J. McCUEN**,.
Superintendent of Lamps and Lighting.

Approved August 20, 1913:

(Signed) **JAMES H. PRESTON**,
President Board of Awards.

(Signed) **S. S. FIELD**,
City Solicitor.

SPECIFICATIONS

For Incandescent Gas and Naphtha Lighting Equipment and Maintenance.

1. Proposals will be received for mantle gas lighting equipment, which will include the furnishing and maintaining by the contractor of entirely new incandescent mantle burners, mantles, automatic regulators, metal draught tubes (if necessary), and glass chimneys, lanterns and lamp heads, globes and all other necessary fixtures, parts, appliances and supplies used for incandescent street gas lighting, except lamp posts, as provided herein, which will be furnished by the city for all the gas lamps now in service in the public streets, avenues, lanes, alleys, parks and squares, and on the bridges within the City of Baltimore, and pro rata for such additional gas lamps as may be ordered to be installed by the Superintendent of Lamps and Lighting, and also to replace all broken or damaged glass street signs. All of said gas lamps' fixtures must be attached to all city lamp posts by the contractor, in a proper manner, so as to occupy an upright position in a vertical central line with the lantern so that the products of combustion will pass directly through the opening in the deflector plate on the "Miner" type of lamp or in the center of the crown of the "Boulevard" type of lantern, or through any other ornamental type or design of lantern that may be adopted by the Superintendent of Lamps and Lighting during the term of the contract. The city will pay for the necessary supply of gas, which will be furnished by the Gas Company under a separate contract with the city.

The contractor must estimate to keep all of said incandescent gas lamp fixtures in thorough repair, replace all broken and cracked globes and parts and all broken and defective mantles at all times when found necessary, during the term of the contract.

The mantle burners used during the term of this contract shall be thoroughly cleaned and kept free from all grease, dirt, filings and other obstructions. The gas mantle burners which are to be used in connection with this contract must be upright burners.

The contractor will be required to furnish at his own expense, all the labor that may be necessary to equip, repair, paint, clean, light and extinguish the mantle gas lamps.

2. Proposals will be received also in connection with the foregoing for the operating and maintaining of naphtha, or gasoline street lamps, using incandescent mantle burners, which will include the furnishing

by the contractor of iron lamp posts, lamps or lanterns (either globe type or square frame or other ornamental lantern), incandescent mantles, glass chimneys and draught tubes, globes, glass street signs and all necessary fixtures and appliances for operating these street lamps now in service within the City of Baltimore, and for all additional incandescent naphtha or gasoline street lamps, pro rata the contract price that may be ordered to be installed within the City of Baltimore by the Superintendent of Lamps and Lighting during the existence of this contract. . The contractor who may secure the award of this contract will be required to furnish all the gasoline or naphtha necessary to supply each such naphtha lamp each night during the term of the contract with a sufficient quantity of gasoline or naphtha to insure the standard of light (not less than 55 candle-power), required at all times during the hours of burning, which gasoline or naphtha must be of the very best grade and of a gravity of not less than seventy (70) degrees, free from water, gum, glue or other impurities. The contractor will be required to furnish at his own expense, all the labor that may be necessary to install, equip, repair, remove or transfer, paint, clean, light and extinguish these incandescent naphtha street lamps, and to perform any other work in connection with this character of street lighting.

Bidders must submit alternate proposals for naphtha lamps, posts to be furnished by the city.

3. Bids or estimates must be submitted according to the plans hereinafter specified, in sealed envelopes, marked "Proposals for Gas and Naphtha Street Lamp Fixtures and Maintenance," and addressed to the Board of Awards, in care of Richard Gwinn, City Register, at the City Hall, Baltimore, Maryland, not later than 11 o'clock A. M., Wednesday, September 3, 1913.

4. All bids must contain two propositions, namely: one for operating mantle gas lighting per lamp per year, as set forth in Section 1 herein, and one for mantle naphtha lighting per lamp per year, as set forth in Section 2 herein. The two propositions shall be considered together as going to make up one bid and not separately; the intent being to award the gas and naphtha street lighting contract to one contractor.

Bidders will be required to submit a proposal to furnish, operate and maintain (per annum) mantle gas lamps of two burners each; that is to say, two burners to be attached to one lamp post or standard and to be enclosed in one lantern or globe.

5. After the bids are opened by the Board of Awards, no bidder will be permitted to withdraw from the competition for this contract.

6. Bids or estimates must be submitted for the terms of one, two, three and five years.

Certified Check Must Accompany Each Bid.

7. Each bidder must enclose with his bid his certified check of two thousand ($2,000) dollars, made payable to the Mayor and City Council of Baltimore. The check of the successful bidder will not be returned to him until he has entered into a formal contract with the city and has given a satisfactory bond as a guarantee that the bidder will perform said contract according to the specifications and that he will properly perform the work required by the terms of these specifications. If the successful bidder fails to furnish the bond as required within ten days after the award of the contract has been made, the bidder's check shall be forfeited to the City of Baltimore.

Bond for Faithful Performance of Contract.

8. The successful bidder will be required to give bond in the amount of the contract price, conditioned that he shall comply in all respects with the terms and conditions of the contract, and his obligations thereunder, including the specifications, and shall indemnify and save harmless said Mayor and City Council of Baltimore, against or from all costs, expenses, damages, injury or loss, to which the said Mayor and City Council of Baltimore may be subjected by reason of any wrongdoing, misconduct, want of care or skill, negligence or default upon the part of the contractor, his agents or employees in or about the execution or performance of the contract, including said specifications, and shall save and keep harmless said Mayor and City Council of Baltimore against and from all claims or losses to it from any cause whatever, including patent infringements, in the matter of furnishing, operating and maintenance of gas and naphtha street lamp fixtures.

Whenever any material, process, composition or thing called for by these specifications is covered by letters patent, the successful bidder must secure, before using or employing such material, process, composition or thing, the assent, in writing, of the owner or licensee of such letters patent, and file the same with the Superintendent of Lamps and Lighting.

Whenever the surety or sureties on the bond so furnished shall be deemed by the Mayor to be insufficient or unsatisfactory, the contractor, within ten days after notice to that effect, shall furnish and deliver a new bond to the Mayor and City Council of Baltimore, in the same penalty and on the same conditions, with surety satisfactory to the Mayor, and this duty shall continue on the part of the contractor, whenever and so often as the Mayor shall require a new bond with a satisfactory surety or sureties. If the contractor shall fail to furnish such bond within ten days after said notice mailed to his address, the Mayor and City Council of Baltimore, through its proper agent or agents, may stop all further work under said contract and relet the unfinished work at the expense of the contractor.

The contractor shall give his personal attention constantly to the faithful performance of the work, shall keep the same under his own control and shall not assign, by power of attorney or otherwise, nor sublet the work or any part thereof, without the previous written consent of the Superintendent of Lamps and Lighting. He shall state to the Superintendent of Lamps and Lighting, in writing, the name of such sub-contractor as he intends employing, the portion of the work which he is to do or the material which he is to furnish, his place of business and such other information as the Superintendent of Lamps and Lighting may require, in order to know whether such sub-contractor is reputable and reliable, and able to perform the work or to furnish the material as called for in the specifications.

He shall not, either legally or equitably, assign any of the moneys payable under the contract, or his claim thereto, unless by and with the like consent of the Superintendent of Lamps and Lighting.

9. To prevent disputes and litigations, the Superintendent of Lamps and Lighting shall in all cases determine the amount, quality and acceptability of the work which is to be paid for under the contract; shall decide all questions in relation to said work and the performance thereof, and shall in all cases decide every question which may arise relative to the fulfillment of the contract on the part of the contractor. His determination, decision and estimate shall be final and conclusive, and in case any question shall arise between the parties touching the contract, such determination, decision and estimate shall be a condition precedent to the right of the contractor to receive any moneys under the contract.

Should any questions arise as to the true construction of this contract or the specifications hereto attached, said questions shall be submitted to the Superintendent of Lamps and Lighting, whose decision thereon shall be final, binding and conclusive on all the parties. This provision is in addition to, and not in substitution for, the preceding paragraph.

Non-Performance of Contract.

10. Notwithstanding the provisions of Paragraph 9 of these specifications, if the contractor shall not well and truly observe, perform, fill.

and keep all and singular the covenants and conditions hereinbefore and hereinafter mentioned and contained on its part to be observed and performed, fulfilled and kept according to the true intent and meaning of these specifications, then in case the Mayor may so determine, he may and shall have the power on the part of the City of Baltimore to declare this contract annulled and vacated, and thereupon it shall become and be thenceforth null and void.

Date When This Contract Shall Commence.

11. The present contract for the gas and naphtha lamp equipment, maintenance and operation, will expire November 30, 1913, and the contract awarded under these specifications for such fixtures and service shall begin December 1, 1913. All street lamps on the city streets, alleys and bridges and in the city parks and squares must be equipped in as reasonable time after the first day of December, 1913, as practicable, not to exceed thirty (30) days thereafter.

Contractor Must Perform All Work Promptly.

12. Should the contractor fail to commence the work of equipping the gas and naphtha street lamps at or during the time specified or to operate, maintain, repair, paint, clean and fit up the lamps or to install new lamps or to do any work as specified hereinbefore or hereinafter, after due notice has been given, the Superintendent of Lamps and Lighting may and shall have the power to cause such work to be performed by other parties and to deduct the expenses thereof from any moneys which may be due or may become due the contractor and to hold the contractor and his sureties liable for the amount thereof which may be in excess of the price stipulated in this contract.

Assignment of Contract—Experience.

13. Any assignment of this contract or sub-letting of the work to be done under said contract shall be subject to the consent of the Superintendent of Lamps and Lighting and shall not otherwise be done.

Bidders must present satisfactory evidence that they have been regularly engaged in the business of incandescent gas and naphtha mantle street lighting, and that they are fully prepared with the necessary capital, material and appliances to conduct the work covered by their contract, to the satisfaction of the Superintendent of Lamps and Lighting, and to begin the said contract within the time limit mentioned in Section 11 of these specifications.

Rights of the Board of Awards.

14. The Board of Awards reserves the right to reject any or all bids.

Equipment, Its Adjustment During the Term of Contract and Its Disposal at the Expiration of the Contract.

15. The contractor will be required to furnish incandescent mantle burners and all other lamp fixtures specified in "Sections 1 and 2" of these specifications, and also to furnish the lamps and lanterns for all additional lamps for the streets, alleys, parks, squares and bridges that may be ordered to be installed by the Superintendent of Lamps and Lighting during the term of this contract, as well as any ornamental lamps, lanterns or globes, and fixtures that may be ordered from time to time; globes to be subject to the approval of the Superintendent of Lamps and Lighting; all lanterns and globes, burners and other necessary lamp fixtures furnished by the contractor and used by him in the operation of this contract shall remain the property of the said contractor, but the City of Baltimore reserves the right to purchase the lamp fixtures, or any part thereof, except burners, at any time before or at the expiration of this contract, at the actual value at that time. At the completion of this contract all lamp fixtures owned by the contractor shall be removed by him, except such lamp fixtures, lamps, lanterns or globes that may be owned or purchased by the city, and the street lamps must be restored to the same condition in which the contractor found them at the beginning of the contract, without cost to the City of Baltimore, and the value of the lamp equipment at any time before or at the expiration of this contract, should the city decide to purchase the same, shall be determined by the contractor, the Superintendent of Lamps and Lighting and by a third person, who shall be selected by the said contractor and the Superintendent of Lamps and Lighting, or by the Mayor, in case of their failure to select such third person within thirty days. The city reserves the right to purchase the globes and fixtures at the expiration of the contract.

All Lamp Fixtures Must Be Latest Improved Pattern.

16. As it is the intention of the Superintendent of Lamps and Lighting to gradually discontinue the use of all the old "Miner" lanterns, on account of these lanterns having become unserviceable, owing to their twenty years' service, the successful contractor will be required to furnish "Boulevard" lanterns and globes, or any other artistic design of lanterns or lamp heads with iron lamp extensions, acceptable to the Superintendent of Lamps and Lighting, which "Boulevard"

lanterns or other artistic design of lanterns are to take the place during the term of the contract of said "Miner" lanterns now in use. Therefore, each bidder must be governed accordingly in the preparation of his bid or estimate.

The successful contractor will be required to paint letters forming the names of streets on such ornamental or artistic lantern globes which may be adopted and on which it may be impossible to properly place the usual glass street signs. The size and color of the lettering must be subject to the approval of the Superintendent of Lamps and Lighting.

All burners, mantles, globes, appliances and fixtures furnished under this contract shall be of the latest improved pattern. Should it be found that any modern invention, improvement, alteration or change of any kind in lamp fixtures shall have been made or discovered during the progress of this contract whereby the light-giving power of the lamps furnished under this contract may be increased or the ornamentation of the lamp equipment furnished under this contract may be improved, thereby adding to the efficiency of the service, then, in that case, the city, through the Superintendent of Lamps and Lighting, shall have the power to order such inventions, improvements, changes or alterations, and any reasonable cost in addition to the existing contract price shall be paid to the contractor, upon the approval of the Board of Awards.

Lamp Burners—"Pilot" or "By-Pass."

17. Should the contractor who may receive the award of this contract desire to use incandescent mantle burners with "Pilot" or "By-Pass" attachment by which the gas is burned during the day or continuously, then, in that case, it is distinctly understood that the contractor must be responsible and shall pay for the quantity of gas it shall be determined has been burned each month by the contractor for the use of such burners and attachments each day. The quantity of gas consumed by the "Pilot" light will be ascertained by the Superintendent of Lamps and Lighting by connecting a series of six lamps with one meter and the average consumption thus obtained shall form a basis for determining the quantity of gas consumed by all such "Pilot" or "By-Pass" burners during the day time or continuously, and each lamp having the "Pilot" light shall be adjusted to such a height that it will not be extinguished through the diminution of pressure or blown out when fixed in the lantern for street service and the total amount of gas so consumed by the "Pilot" or "By-Pass," on all the street lamps must be paid for by the contractor.

In case "Pilot" or "By-Pass" burners are used the contractor will be required to place them on all gas lamps in each lamp-lighter's district, including the three meter lamps. Should the contractor fail to equip all street gas lamps in each lamp-lighter's district, including the three meter lamps, with such burners, after notice from the Superintendent of Lamps and Lighting, a fine at the rate of twenty-five cents each lamp each night will be imposed upon the contractor for every lamp not so equipped.

The contractor will be required to adjust each "Pilot" burner on each street gas lamp so as to burn as nearly as possible the same amount of gas on each lamp.

Care of Lamp Burners.

18. Each incandescent mantle gas burner must be kept clear at all time so as to allow a free and unobstructed flow of gas and must be adjusted and regulated by the use of automatic regulators and governors so as to produce a light equal in power to not less than fifty-five (55) candles, under varying pressure of gas above two inches during the hours of burning. The means used to regulate the supply of gas, the shutters used to regulate the supply of air, the tubes and all other attachments of the burners must be kept free from rust and corrosion so as to permit of being easily adjusted or regulated when found necessary to increase or diminish the consumption of the gas and the supply of air, as conditions may demand from time to time, to insure a perfect bunsen and to maintain the standard of light required at all times during each night.

Incandescent mantle naphtha burners must be properly regulated and kept clean so as to insure a light equal to not less than fifty-five (55) candle-power at all times during the hours of burning.

Incandescent Mantles.

19. All incandescent mantles to be used with an upright burner in the operation of this contract must be such as are best suited to the burners adopted. No incandescent mantle will be permitted to be used unless composed of the best material and standard weave not less than 2¾ inches in length, and of first-class quality in all respects. No incandescent mantle shall be allowed to be used by the contractor which will shrink beyond reasonable dimensions from its original size, and all broken, smoked or blackened, ragged or frayed mantles must be removed at once and must be replaced by new mantles by the contractor. A fine at the rate of double the contract price per lamp per night shall be imposed on the contractor each night for every lamp which contains a short mantle, or a mantle less than the specified size.

Wire Gauze Burner Heads.

20. The wire gauze heads shall be kept perfectly clean and shall be replaced with new ones whenever the wire gauzes shall become corroded from weather or other conditions or when destroyed by the action of the heat.

Lamp Chimneys and Draught Tubes.

21. The contractor will be required to equip all street lamps now in service and such additional street lamps that may be placed in service during the term of this contract with metal draught tubes and glass chimneys of the very best quality. The metal draught tubes shall be placed directly over the burner and mantle, the lower point of the tube to reach the top of each mantle, and the glass chimneys shall be placed around the burner and mantle.

Lamp Globes and Street Signs.

22. The lamp globes and lantern glass must be of good quality lead glass, free from all defects whatsoever and the contractor will be required to fit the globes and lantern glass properly at the bottom and top of the gas and naphtha lamp frames so that the burner and mantle will not be affected by the action of the wind or by bugs and insects, to the extent of reducing the standard of light required. All globes, domes, lantern glass, lamps and street signs are to be kept in a perfectly clean condition so that the light of the lamps will be absorbed or obstructed as little as possible. The globes, domes, lantern glass and street signs are to be cleaned at least twice each week and oftener if directed by the Superintendent of Lamps and Lighting. A failure on the part of the contractor to clean dirty or soiled globes, chimneys and domes, or to replace broken globes, broken, misplaced or missing street signs in a reasonable time *after his attention has been called to such conditions by the Superintendent of Lamps and Lighting*, will subject said contractor to a fine of twenty-five cents in each case, each time such failure occurs.

Candle Power Required and Tests to Be Made.

23. The contractor will be required to maintain in each street lamp with the use of an incandescent mantle burner and fixture, a standard of light equal in power to not less than fifty-five (55) candles at all times during the hours of burning. A candle power shall be the intensity of light produced by the Standard sperm candle, consuming not less than one hundred and twenty (120) grains of wax per hour.

The tests made in the laboratory, should it be decided to test by such method, shall be either by the standard candle system or by the "Harcourt Pentane Standard."

For the purpose of ascertaining whether or not the candle power required is being maintained at the proper standard the Superintendent of Lamps and Lighting shall have the right at all times to order photometric or other tests of the lamp burners and mantles, to be made in such manner as he may determine, both at the laboratory of the Department and in position as the lamps appear when in service on the streets, parks, squares and bridges, at which the contractor or his representative may be present.

When the test of the lamp burners and mantles, which shall be removed from the street lamps, are to be made at the laboratory, or elsewhere, the contractor will be notified so as to enable him to furnish burners and mantles to replace those removed for testing purposes. If the lamp burners and mantles so tested show a light less than fifty-five (55) candle power and the cause is found to be due to defective burners or mantles, or to a faulty equipment of any kind, or to any neglect of the contractor to regulate the burners and mantles properly, then in that case, a fine of fifty cents shall be imposed upon the contractor for every one of such defective lamp burners and mantles, which fine shall be deducted from any moneys which may be due the contractor by the city.

The tests shall be made as often as may be deemed necessary by the Superintendent of Lamps and Lighting.

Trial Tests.

24. Each bidder will be required to furnish for exhibition the lamp fixtures and equipment such as are proposed by him to be used in connection with this contract, and to place the fixture on the lamp posts at such points on such streets as may be designated by the Superintendent of Lamps and Lighting, at least three (3) days *prior* to the opening of the bids.

The Superintendent of Lamps and Lighting shall have the right to test for the purpose of ascertaining the light-giving power and the general efficiency, all burners and mantles which which may be submitted, before the award of the contract is made, which test shall be made in such manner and at such place or places, as may be determined upon by the Superintendent of Lamps and Lighting. Any gas burner which shall fail under such test to produce a light equal in power to fifty-five (55) candles on a consumption of three (3) cubic feet of gas per hour, and any naphtha burner which shall fail to produce fifty-five (55) candle power shall be rejected and the bidder who may own such burner or burners shall be disqualified.

Consumption of Gas.

25. The contractor shall equip each street gas lamp with an incandescent mantle, burner and fixtures so combined and adjusted as to secure under all ordinary variations of gas pressure, a light equal in power to not less than fifty-five (55) candles, on a consumption of three (3) cubic feet of gas per hour, and the contractor will be required to pay for any quantity of gas burned in excess of three (3) cubic feet of gas per hour, and any amount shown by the meter lamps as properly chargeable against the contractor shall be deducted by the Superintendent of Lamps and Lighting from his monthly payments.

Time for Lighting and Extinguishing Street Lamps

26. All gas and naphtha street lamps within the City of Baltimore must be lighted and extinguished *one hour after* the time designated to begin to light each evening and to extinguish each morning said street lamps, and the contractor must agree to comply strictly with this requirement by employing a sufficient force of lamp lighters to insure the gas and naphtha lamps being so lighted and extinguished.

If the contractor fails, for any reason, to light the lamps in the evening or extinguish said lamps in the morning, in accordance with the *daily* schedule of lighting and extinguishing issued by the Superintendent of Lamps and Lighting, to the inconvenience or injury of any person or persons using the public streets during the evening or the morning, the said contractor will be held solely responsible and will be liable for any damage that may be sustained by any such person or persons who may be inconvenienced or injured as a result of such failure to light and extinguish the lamps as hereby required.

The street lamps must be lighted and extinguished strictly in accordance with the official schedules, or time tables, issued and furnished by the Superintendent of Lamps and Lighting, which schedule or time table shall aggregate four thousand (4,000) burning hours per lamp per annum.

All street lamps must be lighted and extinguished one hour after the time specified to begin to light and extinguish. No street lamps shall be lighted or extinguished before the time specified to begin to light and extinguish.

In order that the Superintendent of Lamps and Lighting and his assistants may determine whether the lamps are lighted and extinguished in accordance with the official schedule or time table, hereinbefore mentioned, the contractor shall furnish the Superintendent of Lamps and Lighting with maps or lists showing the number and geographical location of each lamp in each lamp-lighter's district, and shall designate the particular lamp at which the lamp lighter commences to light, also the central lamp and the lamp at which each lamp lighter completes the lighting and extinguishing the lamps. The lamp lighter shall begin and finish at the same lamps as are designated for beginning, centre and finishing the lighting, and the contractor shall notify the Superintendent of Lamps and Lighting of any change which may be made in the beginning, centre and finishing points on any lamp district during the term of this contract. A fine at the rate of double the amount of the contract price per lamp per night will be imposed on the contractor each night for every lamp not lighted within the hour from the time of beginning to light, and a fine in the same amount shall be imposed on every lamp found lighted before the hour designated to begin to light. The same penalty will be imposed for every lamp found extinguished before the time specified to begin to extinguish.

Arrangement of Lamp Lighter's District and the Order of Lighting and Extinguishing Meter Lamps.

27. Each lamp lighter's district throughout the city which may entirely consist of gas lamps, shall be arranged so as to include not less than three (3) meter lamps at substantially the beginning, centre, and end of each lamp-lighter's district. Should it be found necessary to rearrange any lamp lighter's district, the Superintendent of Lamps and Lighting must be notified of such rearrangement or change by the contractor, and thereupon, the city will bear the expense of removing the meter lamps to the new location necessary to maintain the positions above mentioned, and these meter lamps must be lighted and extinguished in the regular order in which they are arranged. The contractor will be required to regulate all meter lamp burners so that these lamps will at all times maintain the standard of light equal to that of the non-metered lamps. A fine of twenty-five cents will be imposed upon the contractor for every meter lamp which is found to be a dim light, or producing a less volume of light than is shown by non-metered lamps, which fine shall be deducted from the contractor's monthly payments.

Daily Reports.

28. The contractor shall daily, before 12 o'clock noon, submit a written report to the Superintendent of Lamps and Lighting, stating the number of lamps, and their location, which were not burning or defective during the preceding night, if any, and the cause thereof.

Penalty for Defective Street Lighting.

29. Any lamp that fails to burn continuously during the hours scheduled, or any lamp found to be defective in any manner, causing such lamp to fall below the standard of light required, shall subject the contractor to a fine at the rate of double the amount of the contract price per lamp, per night, and all such fines shall be deducted each month from any money due the contractor by the city. Defective lights, which may result from any cause or condition over which the contractor or his agents or employees shall have no control, shall not be subject to a fine, but such conditions shall be determined by the Superintendent of Lamps and Lighting.

Repairs of Street Lamps to be Made by the Contractor.

30. The contractor shall, without extra pay, replace all wrecked, broken or damaged lamp posts with new ones, repair all lamp posts, lanterns and lamps, straighten all leaning lamp posts, replace broken globes and broken or missing street signs with new ones, relay all sidewalks and replace the surface disturbed in erecting or moving street lamps, keep all lanterns, globes and sign frames in proper position, place all street signs so that all the letters forming the name of the street can be seen at all times, so that the lanterns or lamps and lamp posts will at all times present to the public a neat and attractive appearance, and in general maintain the street lighting plant in first-class condition. The repairs will include painting the lamp posts and lanterns once during the year. Painting will be done in a good and workmanlike manner, with paint of a color and quality to be determined by the Superintendent of Lamps and Lighting. The contractor will keep such of the city property that may be used in the operation of this contract in thorough repair, and shall deliver the same to the city at the expiration of the term of the contract in good order and condition. The work and repairs enumerated in this section must be done by the contractor in as reasonable time after the order has been given by the Superintendent of Lamps and Lighting as possible.

If the contractor shall fail to perform the work, repairs and maintenance as specified in this section within ten days after being notified by the Superintendent of Lamps and Lighting, then the work set forth herein will be done by the City of Baltimore, under the supervision of the Superintendent of Lamps and Lighting, and the cost of the work shall be deducted from any moneys that may be due the contractor by the city.

Wrecked Street Lamps.

31. The contractor will be required to re-erect all street lamps and lamp posts that may be wrecked or broken down by runaway teams or through any other kind of accident or cause, and all the lamp fixtures including the lamp posts and the labor necessary in erecting the new lamp and post in place of the wrecked or broken lamp and post must be furnished the city by the contractor at his own expense. Such posts, lamps and fixtures will become the property of the city.

The contractor shall be allowed to collect the actual amount of the expense involved from the person or persons who may have wrecked or broken any street lamps, or whose agents, employees or servants may have wrecked or broken any street gas or naphtha lamp.

Discontinued Gas and Naphtha Lamps.

32. The Superintendent of Lamps and Lighting reserves the right to discontinue from service any number of gas lamps during the term of this contract, as conditions may require, provided the total number be not reduced below 8,000 street gas lamps, also to discontinue the service of such number of gasoline or naphtha lamps as conditions for the good of the street lighting service may demand, provided the number be not reduced below 100.

Number of Lamps in Service—Equipment Owned By the City and By Contractor.

33. There are in the service, August 1, 1913, 9,073 gas lamps, and 343 gasoline or naphtha lamps.

The city owns all gas lamp posts, including 199 artistic posts and lanterns, 1,205 "Boulevard" lanterns and globes, 5,511 "Miner" lanterns and globes to be replaced by "Boulevard" lantern or other artistic design, acceptable to the Superintendent of Lamps and Lighting.

The contractor owns 343 gasoline or naphtha lamp posts and lanterns, 1,605 "Boulevard" lanterns and 470 artistic opalescent globes with ventilators and lamp post extensions for the use of these artistic globes.

Each bidder, therefore, must be governed according to the above information in the preparation of his bid or estimate.

Labor to Be Employed.

34. The contractor shall give preference in employment, first to the citizens of the City of Baltimore, second to the citizens of the State of Maryland, and no workman, laborer or mechanic shall be required to labor more than eight hours in one calendar day.

And it is distinctly understood and agreed that under no circumstances shall minors be employed in connection with the work of this contract, nor shall minors be permitted to assist any workmen having charge of any part of the work of this contract, see also Chapter 85 of the Acts of 1908, and Chapter 94 of the Acts of 1910.

Any violation of the requirements of this section will work a forfeiture of this contract.

35. The successful bidder will be required to place a lamp shade on street lamps, whenever application is made for such by any person who may desire the use of such shade, without cost, either to the applicant or the city. The lamp shade may consist of a frosted inner globe, or a piece of frosted glass securely fastened to the lantern, so as to prevent shifting, or it may be a spot of white paint, about four (4) inches in diameter, painted on the outside of the lamp globe next to the house to be shaded.

No dark shade of any kind, which may darken the sidewalk or the bed of the street, will be permitted under any circumstances.

36. The contractor will be paid by the city for the gas and naphtha street lighting service supplied by said contractor at the contract price, on or before the fifteenth of each month, adjusted according to the number of street lamps in actual use.

(Signed) **Robert J. McCuen,**
Superintendent of Lamps and Lighting.

Approved:

(Signed) **James H. Preston,**
President of the Board of Awards.

(Signed) S. S. Field,
City Solicitor.

BID.

BALTIMORE, MD., September 3, 1913.

Honorable Board of Awards,

City of Baltimore, Baltimore, Md.

GENTLEMEN—In answer to your advertisement, and in strict compliance with the specifications, a copy of which is attached and made a part hereof, we hereby propose, and if awarded the contract, will furnish, install and maintain incandescent gas and gasoline lamps on the streets, avenues, lanes, parks, squares and bridges in the City of Baltimore, in accordance with the various plans suggested by the said specifications, at and for the following prices, to wit:

BOULEVARD OR MINER GAS LAMPS.

(One burner in each lamp.)

One year—Nine dollars and eighty cents ($9.80) per lamp per annum.
Two years—Nine dollars and sixty cents ($9.60) per lamp per annum.
Three years—Nine dollars and forty cents ($9.40) per lamp per annum.
Five years—Nine dollars ($9.00) per lamp per annum.

AESTHETIC OR ARTISTIC GAS LAMPS.

(One burner in each lamp.)

One year—Nine dollars and eighty cents ($9.80) per lamp per annum.
Two years—Nine dollars and sixty cents ($9.60) per lamp per annum.
Three years—Nine dollars and forty cents ($9.40) per lamp per annum.
Five years—Nine dollars ($9.00) per lamp per annum.

BOULEVARD, MINER OR ARTISTIC GAS LAMPS.

(Two burners in each lamp.)

One year—Thirteen dollars and sixty cents ($13.60) per lamp per annum.

Two years—Thirteen dollars and forty cents ($13.40) per lamp per annum.

Three years—Thirteen dollars and twenty cents ($13.20) per lamp per annum.

Five years—Thirteen dollars ($13.00) per lamp per annum.

Gasoline Incandescent Lamps.

(One burner in each lamp.)

One year—Twenty-seven dollars ($27.00) per lamp per annum.
Two years—Twenty-seven dollars ($27.00) per lamp per annum.
Three years—Twenty-seven dollars ($27.00) per lamp per annum.
Five years—Twenty-seven dollars ($27.00) per lamp per annum.

Gasoline Incandescent Lamps.

(One burner in each lamp—city to furnish posts.)

One year—Twenty-seven dollars ($27.00) per lamp per annum.
Two years—Twenty-seven dollars ($27.00) per lamp per annum.
Three years—Twenty-seven dollars ($27.00) per lamp per annum.
Five years—Twenty-seven dollars ($27.00) per lamp per annum.

We herewith enclose our certified check on the National Bank of Baltimore, in the amount of two thousand ($2,000) dollars; also letter from the National Surety Company of New York, same being to the effect that they will furnish bond in the amount of one hundred thousand ($100,000) dollars if the contract is awarded to us.

Trusting we will receive a renewal of our present contract and that the pleasant relations existing between the city and our company will continue, we beg to remain,

Yours very respectfully,

American Street Lighting Company,

(Signed) E. S. Newbold,
President.

Attest:
Charles D. Nicolai,
Secretary.

CONTRACT.

This Contract, Made the twenty-fifth day of September, in the year 1913, by and between The American Street Lighting Company, of Delaware, a private corporation, hereinafter called the Lighting Company, and the Mayor and City Council of Baltimore, a municipal corporation, hereinafter called the City.

Whereas, The contract for lighting the streets, avenues, lanes, alleys, squares, parks and bridges in Baltimore city for a period of three years, accounting from the first day of December, in the year 1913, in accordance with Paragraphs 1 and 2 of the specifications for incandescent gas and naphtha lighting equipment and maintenance, a copy of which is hereto attached and in all respects made a part hereof and subject to all conditions, covenants, stipulations, terms and provisions contained in said specifications, has recently been awarded to the Lighting Company by the City, through the agency of its Board of Awards, at and for the sum of nine dollars and forty cents ($9.40) per lamp per annum for the gas lamps, and at and for the sum of twenty-seven dollars ($27) per lamp per annum for the naphtha lamps having one burner in each lantern; and

Whereas, It was one of the conditions of said award that a formal contract should be executed by and between the Lighting Company and the City, evidencing the terms of said award.

Now, therefore, This contract witnesseth, That the Lighting Company doth hereby covenant and agree with the City that it will well and faithfully light the streets, avenues, lanes, alleys, squares, parks and bridges in Baltimore city, as the same are set forth in said specifications and in accordance with each and every one of the conditions, covenants, stipulations, terms and provisions contained in said specifications, at and for the respective rates of compensation per lamp per annum hereinbefore mentioned for the period of three years, accounting from the first day of December, in the year 1913, and that it will well and faithfully comply with and perform each and every obligation imposed upon it by said specifications or the terms of said award.

And, The City doth hereby covenant and agree with the Lighting Company, that it will pay to the Lighting Company the respective rates of compensation per lamp per annum hereinbefore mentioned in monthly installments, adjusted with reference to the number of lamps in actual use during the several months of said period of three years, accounting from the first day of December, in the year 1913, and that it will well and faithfully comply with and perform, each and every obligation imposed upon it by said specifications, or the terms of said award.

IN WITNESS WHEREOF, The Lighting Company has caused these presents to be signed by its President, and its corporate seal to be hereunto affixed, duly attested by its Secretary, and the City has caused these presents to be signed by the Mayor of Baltimore City, and the corporate seal of the City to be hereunto affixed, duly attested by the City Register.

THE AMERICAN STREET LIGHTING COMPANY,

(Signed) E. S. NEWBOLD.
President.

Attest:

(Signed) GEORGE C. BENDER,

Attest:

(Signed) CHARLES D. NICOLAI,
Secretary.

Approved:

(Signed) JOHN HUBERT,
Mayor Ex-Officio.

Attest:

(Signed) RICHARD GWINN,
City Register.

Approved as to form and legal sufficiency:

(Signed) ALEXANDER PRESTON,
Deputy City Solicitor.

Approved:

(Signed) ROBERT J. MCCUEN,
Superintendent of Lamps and Lighting.

BOND.

Know all men by these presents, That we, the American Street Lighting Company, a corporation created under the laws of the State of Delaware, with its principal place of business in the City of Baltimore, Maryland, as Principal, and the United States Fidelity and Guaranty Company, a corporation created and existing under the laws of the State of Maryland, with its principal office in the City of Baltimore, Maryland, and the National Surety Company, a corporation created and existing under the laws of the State of New York, with its principal office in the City of New York, New York, as sureties, are held and firmly bound unto The Mayor and City Council of Baltimore, in the full and just sum of one hundred thousand ($100,000) dollars) lawful money of the United States, to be paid to the said Mayor and City Council of Baltimore, or their certain attorneys, to which payment well and truly to be made and done we bind ourselves, our successors and assigns, jointly and severally, firmly by these presents.

Whereas, The above bounden American Street Lighting Company has entered into a contract with the said Mayor and City Council of Baltimore, bearing even date herewith, for lighting the streets, lanes, alleys, squares, parks and bridges in Baltimore City for a period of three years, accounting from the first day of December, in the year 1913, upon certain terms and conditions, in said contract more particularly mentioned; and

Whereas, It was one of the conditions of the award of the Board of Awards of said Mayor and City Council of Baltimore, pursuant to which said contract was entered into, that these presents should be executed.

Now, therefore, The condition of this obligation is such, that if the above bounden American Street Lighting Company shall, in all respects comply with the terms and conditions of said contract and its obligations thereunder, including the specifications therein referred to, and made a part hereof, and shall indemnify and save harmless the said Mayor and City Council of Baltimore against and from all costs, expenses, damages, injury, or loss to which the said Mayor and City Council of Baltimore may be subjected by reason of any wrong-doing, misconduct, want of care or skill, negligence, or default, upon the part of the said American Street Lighting Company, its agents or employees in or about the execution or performance of said contract, including said specifications, and shall save and keep harmless the said Mayor and City Council of Baltimore against and from all claims or losses to it from any cause whatsoever, including patent infringements in the matter of furnishing and maintenance of gas and naphtha street lighting and fixtures, then this obligation to be void; otherwise to be and remain in full force and virtue in law.

IN TESTIMONY WHEREOF, The said American Street Lighting Company has caused these presents to be sealed with its corporate seal, attested by the signature of its duly authorized officers, and the said United States Fidelity and Guaranty Company has caused these presents to be sealed with its corporate seal, duly attested by its authorized officers, and the said National Surety Company has caused these presents to be sealed with its corporate seal, duly attested by its authorized officers, this twenty-fifth day of September, A. D. 1913.

AMERICAN STREET LIGHTING COMPANY,

(Signed) E. S. NEWBOLD,
President.

Attest:

(Signed) CHARLES D. NICOLAI,
Secretary.

Witnesses:

(Signed) CHARLES W. MARCH,
(Signed) GEO. C. BENDER.

UNITED STATES FIDELITY AND GUARANTY COMPANY,

(Signed) W. M. SYMINGTON,
Vice-President.

Attest:

(Signed) C. S. PRICE,
Assistant Secretary.

Witnesses:

(Signed) GEORGE H. MCCREADY,
(Signed) DONALD B. CARY.

NATIONAL SURETY COMPANY,

(Signed) LEONARD DAMMAN,
Vice-President.

Attest:

(Signed) HOWARD ABRAHAMS,
Resident Assistant Secretary.

Witness:

(Signed) J. F. MCKENNA,

Approved:

(Signed) JOHN HUBERT,
Mayor Ex-Officio.

Approved as to form and legal sufficiency:

(Signed) ALEXANDER PRESTON,
Deputy City Solicitor.

Approved:

(Signed) W. T. CHILDS,
Deputy Comptroller.

Approved:

(Signed) ROBERT J. MCCUEN,
Superintendent of Lamps and Lighting

SPECIFICATIONS

For Furnishing Illuminating Gas for All Gas Lamps Used by the City in Lighting the Streets, Avenues, Lanes, Bridges, Public Parks, Squares and Places, and for Use in Lighting the Public Buildings Within the City of Baltimore.

1. Bids will be received for furnishing illuminating gas for all the street and outdoor lamps operated by the city under the incandescent mantle system which are now in service, and which may hereafter be placed in service, and for lighting all the public buildings within the city of Baltimore, under the following conditions:

2. Bids must be submitted in sealed envelopes marked "Proposals for Furnishing Illuminating Gas for Street Lamps, and for Use in All Municipal Buildings and Other Places Within the City of Baltimore," and addressed to the Board of Awards, in care of the City Register, at City Hall, Baltimore, Md., not later than 11 o'clock A. M., Wednesday, March 5, 1913.

3. Bids must be submitted for terms of one, two, three and five years, beginning March 1, 1913.

Certified Check.

4. Each bidder must enclose with his bid his certified check on a clearing-house bank for five hundred ($500) dollars, made payable to the order of the Mayor and City Council of Baltimore. The check of the successful bidder will be returned after the execution of the contract and after a proper bond has been given for the faithful performance of the contract. If the bidder fails to furnish the bond as required by these specifications within ten (10) days after the award is made, the said check shall be forfeited to the city.

Bond for Faithful Performance of Contract.

5. Bond in the amount of the contract price will be required upon the award of the contract conditioned for the faithful performance of each and every one of the terms of the contract to be performed by the contractor as herein specified, and the contractor by said bond shall indemnify and hold harmless the Mayor and City Council of Baltimore city, its officers, agents and servants, each and every one of them,

against and from all suits and actions of every name and description brought against the Mayor and City Council of Baltimore city, or any of its officers, agents or servants, arising out of the execution and performance by it of said contract and also from all damages and costs to which it, they or any of them may be put by reason of injury to the person or property of another, resulting from negligence or carelessness in the performance of the contractor's obligations under this contract or from any accident of any kind caused by an explosion of gas resulting from a leak in the contractor's service pipes, which extend from the contractor's mains to the base of each lamp post, or in the riser pipe, which extends from the base of each lamp post to the burner at the top, or from failure on the part of the contractor to comply with any or all of the conditions of these specifications, or from any act or omission of said contractor or its agents, or from claims based on patents or alleged patents.

Wherever any material, process, composition or thing, called for by these specifications, is covered by letters patent, the successful bidder must secure, before using or employing such material, process, composition or thing, the assent, in writing, of the owner or licensee of such letters patent, and file the same with the Superintendent of Lamps and Lighting.

Whenever the surety or sureties on the bond so furnished shall be deemed by the Mayor to be insufficient or unsatisfactory, the contractor, within ten days after notice to that effect, shall furnish and deliver a new bond to the Mayor and City Council of Baltimore, in the same penalty and on the same conditions, with surety satisfactory to the Mayor, and this duty shall continue on the part of the contractor, whenever and as often as the Mayor shall require a new bond with a satisfactory surety or sureties. If the contractor shall fail to furnish such bond within ten days after said notice mailed to his address, the Mayor and City Council of Baltimore, through its proper agent or agents, may stop all further work under said contract and relet the unfinished work at the expense of the contractor.

Power of Board of Awards.

6. The Board of Awards reserves the right to reject any or all bids.

Plan of Bids to Be Submitted.

7. Bidders will be required to submit separate bids according to the following plans:

(*a*) State in the bid the price of gas to be consumed by each lamp per annum; each lamp not to exceed four thousand (4,000) burning hours in any one year, or to burn more than two and one-half (2½) cubic feet of gas in any one hour.

(*b*) State in the bid the price of gas to be consumed by each lamp per annum; each lamp not to exceed four thousand (4,000) burning hours in any one year or to burn more than three cubic feet of gas in any one hour.

(*c*) State in the bid the price of gas per thousand cubic feet, based upon a total annual consumption of gas at about 90,000,000 cubic feet, which shall include the gas consumed in all street lamps, the City Hall, Court House, City Hall Annexes, all the public school houses, market and engine houses, police station houses and halls and in other public buildings or places within the City of Baltimore in which gas is used and for which the city pays.

8. If at any time during the continuance of the contract to be awarded under these specifications, the price of gas should be reduced, either voluntarily by the contractor, or by the Public Service Commission, below the price at which the contract is awarded, then the City shall pay the contractor such reduced prices only in proportion to the reduced price, which may be decided upon.

Excess Gas Burned to Be Paid for in Proportion to Contract Price Per Annum.

9. Any quantity of gas that it shall have been determined has been burned by the city street gas or outdoor lamps during any one month, in excess of the quantity contracted for by the city, the contractor will be paid for such excess quantity of gas, so burned, at a rate in proportion to the contract price per lamp per annum.

Penalty for Failure to Supply Gas to Any Street Lamp.

10. The contractor will be required to furnish the necessary supply of gas at the burner for all street and outdoor gas lamps now in service, or which may hereafter be placed in service, each and every night during the existence of this contract, the quality of gas to conform in all respects to the standard required by ordinance of the Mayor and City Council of Baltimore and to be delivered at a pressure, if possible, not less than two (2) inches and free from undue or violent fluctuations. In the event of any failure to furnish a free and unobstructed flow of gas to any one or more of the street or outdoor lamps during one or more nights during the term of this contract, a deduction shall be made from the monthly bills of the contractor for each and every one of such lamps not so supplied with gas at a rate in proportion to the contract price per lamp per night, unless such failure be due to no fault of the contractor.

Cost of New Service Connections.

11. The contractor will be required to make service connections from the gas main pipes to such additional street and outdoor gas lamps as may hereafter be ordered to be erected by the Superintendent of Lamps and Lighting, the city agreeing to pay a flat rate for material and labor used in connecting each lamp by the contractor; this payment to cover the cost of laying the service pipes and making the connections from the gas mains to each lamp to the point of burning and shall include the cost of excavating and refilling the trench and repaving cobble stone or other unimproved pavements. If during the term of the contract it shall become necessary for the contractor, upon order of the Superintendent of Lamps and Lighting, to open an improved pavement for the purpose of laying service pipes to additional lamps or for the transfer of existing lamps, the city agrees to pay the contractor the actual cost for opening and restoring the improved pavement in addition to the flat rate, or fixed charge, for the service pipe connections or the disconnection of the service pipes from the lamps to be transferred, less the item of expense included in said flat rate or fixed charge for opening and restoring the cobble stone pavements or for any other character of unimproved pavement.

Changes of Locations of Street Lamps.

12. The contractor will be required to make such changes of locations of street lamps and alterations in the service pipes or connections supplying with gas the gas lamps now in service and additional lamps which may hereafter be placed in service, as may be ordered by the Superintendent of Lamps and Lighting, and the actual cost only of making all such changes or alterations will be paid to the said contractor by the city. The contractor will be required to place and connect the meters for all new or additional meter lamps. The contractor shall make no charges for the disconnecting of a lamp and lamp post, the use of which is discontinued until the lamp and lamp post are removed from the location where they were standing at the time of such discontinuance upon the order of the Superintendent of Lamps and Lighting.

Service Pipes to Be Kept in Good Condition—Damaged Service Pipes.

13. The contractor will be required to keep his or their supply pipes, or service connections, running from the contractor's main pipes to the city street or outdoor gas lamps up to the burners in good condition and in thorough repair, and as far as possible free from water and other

obstructions, so as to permit an unobstructed flow of gas at all times to each lamp burner under the full pressure as provided, as well as to guard against accidents of any kind that may result from an explosion of gas due to leaks or to defective service pipes. Should any of the supply pipes or service connections become damaged or disconnected in any manner so as to interfere with a free and unobstructed flow of gas as provided, the contractor shall make all the necessary repairs as promptly as possible without cost to the city. If such damage be done by the city or any of its agents or employees, the contractor will be required to make the necessary repairs and the actual cost of making such repairs will be paid by the city.

Gas Burned to Be Determined by Meter Lamps.

14. The quantity of gas consumed by the street gas lamps and in the city buildings mentioned herein shall be determined by meter measurement, in accordance with the provisions of the City Charter and the ordinances of the City Council relating thereto. The meters for the city buildings shall be located and connected in the manner in general use; the meters for the street lamps shall be placed in approximately the first, middle and last lamps in each lamplighter's district, the average of which shall determine the basis of consumption of gas for all other street gas lamps. (The city will maintain a meter post at substantially the beginning, middle and the end of each lamplighter's route and in case any routes are changed during the term of the contract, the necessary changes will be made by the city in the meter posts so that a meter will always be at substantially the beginning, middle and end of each lamplighter's route.)

Lamplighters' Routes.

15. The contractor will be furnished by the city with an accurate description of the lamplighters' routes and the order followed in lighting and extinguishing the lamps, which lamps shall be lighted and extinguished in the order given.

Right of Access to Lamps and Posts.

16. The contractor will be given access to the burners, lamps and lamp posts at all times, in company with a representative of the city, who is to be assigned to that work within three days after written notice to the effect that the contractor desires said access has been

given by the contractor to the Superintendent of Lamps and Lighting; that the contractor at no other times, in no other manner and under no other circumstances, will have access to the said burners, lamps and lamp posts, except when connecting service pipes with new or additional street lamps or when making necessary repairs to service pipes, or when cleaning stopped or frozen pipes. The contractor may make such tests as may be necessary to determine the consumption of gas by the lamp burners, but such tests shall in no event and under no circumstances be used in ascertaining the consumption of gas by the city; the method of ascertaining the consumption of gas being exclusively provided for and determined in Section 14 of these specifications, and the city will use every effort to keep the rate of gas consumption of the burners on the lamps provided with meters uniform with the consumption of burners on the lamps not so provided.

To Be Governed in Work by Ordinances and Acts.

17. The contractor will be governed in the installation, transfer and repair of all street gas lamps in accordance with existing ordinances of the Mayor and City Council and any Acts of the Legislature bearing upon such work.

To Be Paid in Monthly Installments.

18. The contractor will be paid by the city for the gas supplied by said contractor at the contract rate in monthly installments, adjusted according to the number of street lamps in actual use.

(Signed) Robert J. McCuen,
Superintendent of Lamps and Lighting.

Approved, February 13, 1913:

(Signed) John Hubert,
President pro tem Board of Awards.

Approved as to form and legal sufficiency:

(Signed) Alex. Preston,
Deputy City Solicitor.

BID.

March, 4, 1913.

Honorable Board of Awards,

Care of Richard Gwinn, *City Register,*
City Hall, Baltimore, Md.

Gentlemen—It is hereby proposed to furnish illuminating gas for all the street and outdoor gas lamps operated by the Mayor and City Council of Baltimore under the incandescent mantle system, which are now in service and which may hereafter be placed in service, and for lighting all of the public buildings of the Mayor and City Council within the City of Baltimore.

It is hereby proposed to furnish illuminating gas for all the street and outdoor gas lamps, now in service and which may be hereafter placed in service, operated by the city under the incandescent mantle system, along the lines of the company's mains for a period of one, two, three or five years, beginning March 1, 1913, for six dollars and seventy-five cents ($6.75) per lamp per year, each lamp not to exceed four thousand (4,000) burning hours per year, or to burn more than two and one-half (2½) cubic feet of gas in any one hour. In case the consumption of gas exceeds the quantity stipulated, the excess gas will be charged for at the rate of sixty-seven and one-half (67½) cents per one thousand cubic feet. This price per lamp per year and the price for the excess consumption, as in the past, will be applicable to burners singly on lamp posts or in groups of two, three, four or five lamp burners.

In connection with the furnishing of illuminating gas for all the street and outdoor gas lamps, as above, it is also hereby proposed to furnish illuminating gas for use in the City Hall, Court House, City Hall Annex, all the public school houses, market houses, engine houses, police station houses, and halls and all other public buildings or places of the Mayor and City Council of Baltimore along the lines of the company's mains at the rate of seventy-five (75) cents per thousand cubic feet.

It is also hereby proposed to make a flat charge of $7.50 for material and labor used in making service connections from the gas main pipes to such additional street or outdoor gas lamps as may hereafter be ordered to be erected by the Superintendent of Lamps and Lighting; this payment to cover the cost of laying the service pipe and making connection from the gas main to the point of burning, and shall include the cost of excavation and refilling the trench and repaving with cobble stones or other unimproved pavements.

In cases where service connections are to be installed for lamps intended to be erected at a later date, it is hereby proposed to make a flat charge of six dollars ($6.00) per service for material and labor used in making such service connection, from the gas main pipes to points inside of the curb line designated by the Superintendent of Lamps and Lighting as the proposed locations for such additional street or outdoor gas lamps. This payment to cover the cost of laying the service pipe and making the connection from the gas main to the inside of the curb line, and shall include the cost of excavation and refilling of the trench, and repaving with cobble stones or other unimproved pavements.

In cases where service connections are installed to points inside of the curb line, a flat charge of one dollar and fifty cents ($1.50) per lamp will be made, when the service connections are completed from the inside of the curb line to the point of burning.

It is also hereby proposed, pursuant to Section 12 of the Specifications, to make a charge in case of the disconnecting of a lamp and lamp post to cover only the actual cost incident thereto; said charge will not be made until the lamp and lamp post are removed from the locations where they were standing at the time of such discontinuance, upon the order of the Superintendent of Lamps and Lighting.

The above proposals are made in response to the specifications dated February 19, 1913, of Robert J. McCuen, Superintendent of Lamps and Lighting, and subject to the following provisions in the existing contract for the supply of gas, dated, April 4, 1912, which provisions were incorporated after a full discussion and embody the understanding between the Company and the Mayor and City Council of Baltimore:

"It is understood, however, that the city's claim that the Gas and Electric Company is the owner of the service pipes connecting the Gas and Electric Company's mains with the city's lamp posts or other street or outdoor lamps is not admitted by the Gas and Electric Company, but, on the contrary, is disputed by it; and that nothing in the specifications, bid or this contract is intended to affect the question of the true ownership of said pipes, or to be construed as any admission on the part of the Gas and Electric Company that it is the owner of such service pipes. The foregoing, however, is not intended to impair or lessen in any way any obligation imposed upon the Gas and Electric Company by the specifications as to said pipes, irrespective of the question of ownership.

"It is understood that the Gas and Electric Company is not responsible for the condition of the city's piping to its own lamps on the bridges, in the columns and arms, the property of the city, which supply with gas the cluster lamps at the Mt. Royal Entrance to Druid Hill Park, or in the arms which are attached to the top of each of the city lamp posts of the other cluster lamps used by the city, which arms are the property of the American Street Lighting Company."

In making the above proposal, it is with the understanding that Paragraph 8 of the Specifications shall not be construed to mean that there will be a further reduction in the prices of gas named in this proposal for the city when the new gas rates become effective on July 1, 1913.

Respectfully submitted,

CONSOLIDATED GAS ELECTRIC LIGHT & POWER CO. OF BALTIMORE,

(Signed) CHARLES M. COHN,
Vice-President

CONTRACT.

This Contract, Made this 14th day of April, in the year 1913, by and between The Consolidated Gas Electric Light and Power Company of Baltimore, a corporation duly incorporated under the laws of the State of Maryland, hereinafter called the "Gas and Electric Company," party of the first part, and the Mayor and City Council of Baltimore, a municipal corporation, hereinafter called the "City," party of the second part.

Whereas, The City heretofore advertised for bids for furnishing illuminating gas for all the gas lamps used by the city in lighting the streets, avenues, lanes, alleys, bridges, public parks, squares and places, and for use in lighting the public buildings within the City of Baltimore, subject to all of the conditions, covenants, stipulations, terms and provisions contained in certain specifications, a copy of which is hereto attached, and in all respects made a part hereof; and

Whereas, The Gas and Electric Company duly submitted a bid therefor, subject to all of the conditions, covenants, stipulations, terms and provisions contained in said bid, a copy of which is hereto attached, and in all respects made a part hereof; and

Whereas, Said bid was duly accepted and the contract for furnishing illuminating gas duly awarded to said Gas and Electric Company, said contract to run for a period of one year, counting from the first day of March, 1913, and ending on the twenty-eighth day of February, 1914; and

Whereas, It was one of the conditions of said award that a formal contract should be executed by and between the said Gas and Electric Company and the City evidencing the terms of said award.

Now, Therefore, This Contract Witnesseth: That the said Gas and Electric Company doth hereby covenant and agree with the City that it will well and faithfully furnish the said illuminating gas for all the gas lamps used by the City in lighting the streets, avenues, lanes, alleys, bridges, public parks, squares and places along the line of its mains, and for use in lighting the public buildings along the line of its mains, within the City of Baltimore, in accordance with each and every one of the conditions, covenants, stipulations, terms and provisions contained in said specifications, bid and award, and will well and faithfully comply with and perform each and every obligation imposed upon it by said specifications, bid and award.

The City doth hereby covenant and agree with the Gas and Electric Company that it will make payment to the said Gas and Electric Company for the said illuminating gas so used strictly in accordance with the terms of said specifications, bid and award, and that it will well and faithfully comply with and perform each and every obligation imposed upon it by said specifications, bid and award.

It is understood, however, that the City's claim that the Gas and Electric Company is the owner of the service pipes connecting the Gas and Electric Company's mains with the City's lamp posts or other street or outdoor lamps is not admitted by the Gas and Electric Company, but, on the contrary, is disputed by it; and that nothing in the specifications, bid or this contract is intended to affect the question of the true ownership of said pipes, or to be construed as any admission on the part of the Gas and Electric Company that it is the owner of such service pipes. The foregoing, however, is not intended to impair or lessen in any way any obligation imposed upon the Gas and Electric Company by the specifications as to said pipes, irrespective of the question of ownership.

It is also understood that the Gas and Electric Company is not responsible for the condition of the City's piping to its own lamps on the bridges in the columns and arms, the property of the City, which supply with gas the cluster lamps at the Mt. Royal Entrance to Druid Hill Park, or in the arms which are attached to the top of each of the City lamp posts of the other cluster lamps used by the City, which arms are the property of the American Street Lighting Company.

It is further understood and agreed that certain paragraphs of Section 5 of the specifications, specifically referred to in the bid of the Gas and Electric Company, shall not be taken as part of the specifications.

IN WITNESS WHEREOF, The said Consolidated Gas Electric Light and Power Company of Baltimore has caused these presents to be signed by its Vice-President, and its corporate seal, attested by its Secretary, to be duly affixed hereto, and the City has caused these presents to be signed by the Mayor of Baltimore city, and its corporate seal to be hereto affixed, attested by the City Register.

CONSOLIDATED GAS ELECTRIC LIGHT & POWER CO. OF BALTIMORE.

(Signed) CHARLES M. COHN,
Vice-President.

Attest:

(Signed) WM. SCHMIDT, JR.,
Secretary.

Attest to Charles M. Cohn:

(Signed) CHARLES P. CRANE,

Approved:

(Signed) ROBERT J. MCCUEN,
Superintendent of Lamps and Lighting.

Approved:

(Signed) JAMES H. PRESTON,
Mayor of Baltimore.

Attest:

(Signed) RICHARD GWINN,
City Register.

Approved as to form and legal sufficiency:

(Signed) ALEXANDER PRESTON,
Deputy City Solicitor.

BOND.

KNOW ALL MEN BY THESE PRESENTS, That we, THE CONSOLIDATED GAS ELECTRIC LIGHT AND POWER COMPANY OF BALTIMORE, a corporation duly organized under the laws of the State of Maryland, Principal, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, a corporation organized under the laws of the State of Maryland, having its principal office in the City of Baltimore, Maryland, and the AMERICAN BONDING COMPANY OF BALTIMORE, a corporation organized under the laws of the State of Maryland, having its principal office in the City of Baltimore, Maryland, Sureties, are held and firmly bound unto the Mayor and City Council of Baltimore in the full and just sum of seventy-five thousand dollars ($75,000), lawful money of the United States, to be paid to the said Mayor and City Council of Baltimore, or to its certain attorney, to which payment, well and truly to be made and done, we bind ourselves, our successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, The above bounden, The Consolidated Gas Electric Light and Power Company of Baltimore, has entered into a contract with the said Mayor and City Council of Baltimore, bearing even date herewith, for the furnishing of illuminating gas for all the gas lamps used by the city in lighting the streets, avenues, lanes, alleys, bridges, public parks, squares and places, and for lighting the public buildings in the City of Baltimore, upon certain terms and conditions in said contract more particularly mentioned; and

WHEREAS, It was one of the conditions of the award of the Board of Awards of the said Mayor and City Council of Baltimore, pursuant to which said contract was entered into, that these presents should be executed.

Now, therefore, The condition of this obligation is such, that if the above bounden, The Consolidated Gas Electric Light and Power Company of Baltimore shall in all respects comply with the terms and conditions of said contract and its obligations thereunder, including the specifications therein referred to and made a part thereof, and shall indemnify and save harmless the said Mayor and City Council of Baltimore against any suit or suits, loss, damage or expense, by reason of any default, negligence, want of skill or care, on the part of the said The Consolidated Gas Electric Light and Power Company of Baltimore, its agents or employees, or of any sub-contractor in or about the performance or execution of said contract, including said specifications, and from and against any claim, suit, loss, damage or expense arising from the use by the said The Consolidated Gas Electric Light and Power Company of Baltimore, its agents or employees, or any sub contractor, in the performance of its said contract, including said specifications, of any form of material, method of manufacture, machinery, process, composition or thing which is patented, or claimed to be patented, then this obligation to be void; otherwise to be and remain in full force and virtue in law.

In Witness Whereof, The said The Consolidated Gas Electric Light and Power Company of Baltimore has caused these presents to be signed by its Vice-President, and its corporate seal, attested by its Secretary, to be duly affixed hereto; and the said Fidelity and Deposit Company of Maryland, the American Bonding Company, have caused these presents to be signed by their Vice-Presidents and their corporate seal attested by their Assistant Secretary to be duly affixed hereto.

Consolidated Gas Electric Light & Power Co. of Baltimore,

(Signed) Charles M. Cohn,

Dated this 14th day of April, 1913. *Vice-President.*

Attest:

(Signed) William Schmidt, Jr.,

Secretary.

Approved:

(Signed) W. T. Childs,

Deputy Comptroller.

Attest as to Charles M. Cohn:

(Signed) Charles P. Crane,

Fidelity and Deposit Company of Maryland

Attest as to Surety: (Signed) Fred. S. Axtell,

(Signed) Henry Franklin, *Vice-President.*

(Signed) Raymond Holland.

AMERICAN BONDING COMPANY,
(Signed) WILLIAM M. REINHARDT,
Vice-President.

Attest:
(Signed) F. A. BACH,
Assistant Secretary.

Attest:
(Signed) WILLIAM B. WOOD,
Assistant Secretary.

Attest as to surety:
(Signed) FRANK WELSH,
(Signed) JAMES J. HOLDEN.

Approved as to form and legal sufficiency:
(Signed) ALEXANDER PRESTON,
Deputy City Solicitor.

Approved:
(Signed) JAMES H. PRESTON,
Mayor.

Approved:
(Signed) ROBERT J. MCCUEN,
Superintendent of Lamps and Lighting.

SUMMARY OF STREET LAMPS OPERATED AND MAINTAINED UNDER CONTRACTS.

GAS LAMPS (ALL TYPES).

Gas lamps in service January 1, 1913		8,493	
Installed during the year	1,006		
Relit during the year	3		
		1,009	
		9,502	
Discontinued during the year		183	
Net number in service December 31, 1913			9,319

NAPHTHA LAMPS.

Naphtha lamps in service January 1, 1913		368	
Installed during the year	44		
Relit during the year	....		
		44	
		412	
Discontinued during the year		88	
Net number in service December 31, 1913			324

ELECTRIC ARC LAMPS (OVERHEAD DISTRICTS).

Electric arc lamps in service January 1, 1913		1,555	
Installed during the year		98	
		1,653	
Transferred from overhead to underground service during the year	50		
Discontinued during the year	29		
		79	
Net number in service December 31, 1913			1,574
Carried forward			11,217

Brought forward	11,217

ELECTRIC ARC LAMPS (UNDERGROUND DISTRICTS.)

Electric lamps (all-night) in service January 1, 1913		722	
Installed during the year	44		
Transferred from overhead to underground service during the year	50		
		94	
		816	
Discontinued during the year		10	
Net number in service December 31, 1913			806
Electric arc lamps (old type), half-night, in service January 1, 1913		84	
Installed during the year		....	
		84	
Discontinued during the year		....	
Net number in service December 31, 1913			84
Electric luminous or "White Way" all-night arc lamps in service January 1, 1913		202	
Installed during the year		59	
		261	
Discontinued during the year		1	
Net number in service December 31, 1913			260
Electric luminous or "White Way" half-night arc lamps in service January 1, 1913		154	
Installed during the year		2	
		156	
Discontinued during the year		....	
Net number in service December 31, 1913			156
Carried forward			12,523

Brought forward		12,523

INCANDESCENT 40 C. P. ELECTRIC LAMPS.

Incandescent electric 40 c. p. lamps in service January 1, 1913	770	
Installed during the year	155	
	925	
Discontinued during the year	24	
Net number in service December 31, 1913		901

ORNAMENTAL INCANDESCENT ELECTRIC LAMPS.

(Operated and maintained by the Department.)

Ornamental incandescent electric lamps in service January 1, 1913		308	
Installed during the year as follows:			
Western Female High School (2 tungsten bulbs, 40 watts in each lamp)	25		
Polytechnic Institute (2 tungsten bulbs, 40 watts in each lamp)	24		
Harford Road Bridge (over Herring Run) (1-40 watt tungsten bulb in each lamp)	8		
		57	
Net number in service December 31, 1913			365

Total number of lamps (all classes) in service January 1, 1914	13,789
Total number of lamps (all classes) in service January 1, 1913	12,656
Total net gain for the year 1913	1,133

LIST OF TABLES

TABLE A—I.

THE AMOUNT OF APPROPRIATION AND THE AMOUNT OF EXPENDITURES FOR SALARIES.

Original appropriation		$16,788 00

EXPENDITURES.

Robert J. McCuen, Superintendent of Lamps and Lighting	$3,000 00	
William Mohr, Assistant Superintendent of Lamps and Lighting	1,595 83	
James N. Baggett, Chief Inspector	1,595 83	
George Hocheder, Clerk	862 50	
Joseph J. Flynn, Stenographer and Typewriter	720 00	
Benjamin T. Wells, Supt. Eastern District	876 21	
Harry White, Supt. Northeastern District	876 21	
Charles Dollinger, Supt. Western District	876 21	
James H. Carter, Supt. Northwestern District	876 21	
Adam Hensel, Supt. Northern No. 1 District	876 21	
Harry C. Kennedy, Supt. Northern No. 2 District	876 21	
James A. Rodgers, Supt. Southern District	876 21	
Thomas H. Trott, Supt. Central District	876 21	
Frank F. Busch, Inspector of Illuminating Oil	810 67	
Charles Heinritz, Mechanic	912 00	
Total expenditures		16,506 51
Unexpended balance December 31, 1913		$281 49

TABLE A—II.

THE AMOUNT OF APPROPRIATION AND THE AMOUNT OF EXPENDITURES FOR GAS LIGHTING AND MAINTENANCE.

Original appropriation		$179,742 60
EXPENDITURES.		
Cost for maintaining and operating street mantle gas lamps, which includes the rental of burners, mantles, fixtures, repairs and lamplighters' salaries, as per contract	$87,603 61	
Cost of supply of gas to street mantle gas lamps as per contract	67,502 89	
Cost of supply of gas to bridge mantle gas lamps as per contract	2,150 84	
Cost of supply of gas to market halls, as per contract	41 34	
Cost of excess gas ornamental lamps on North Charles street, public squares, etc., over the regular monthly consumption of three cubic feet	1,557 99	
Connecting gas service from main to lamp post	4,544 36	
Connecting gas service from main to curb	3,112 28	
Connecting gas service from curb to lamp post	46 50	
Changing from plain to ornamental posts	195 35	
Changing position gas lamps	1,192 54	
Transferring gas lamps	1,470 18	
Cutting off gas service pipes from unused posts	474 63	
Lowering gas service pipes	5 62	
Ornamental lamp posts—Baltimore design	1,165 97	
Ornamental lamp post fixtures	105 79	
Plain iron lamp posts	3,562 65	
Index doors and casings	24 00	
Hardware, machine supplies, oil and paints	280 25	
Livery—four horses and vehicles	1,175 00	
Cost of Studebaker (25 H. P.) automobile and freight	907 00	
Storage, repairs and hiring of automobile	184 81	
Enameled iron street and zone signs	38 98	
Ruby glass street signs	371 51	
Team hire—hauling posts and material	108 00	
Amounts carried forward	$177,822 09	$179,742 60

Amounts brought forward	$117,822 09	$179,742 60
Repairs to Department wagon	31 67	
Lettering street names on lamp globes	183 40	
Automobile license fee	12 25	
Repairing test gas meter	16 13	
Pentane for testing purposes	12 25	
Car fare	27 50	
Blue printing	2 48	
Filing boxes for blue prints	45 00	
Extending gas main service	29 40	
Lumber	9 65	
Freight and express charges	12 05	
Stationery	4 90	
Extra labor and salaries incident to this account	1,203 88	
Cement and stone	2 10	
Total expenditures		179,414 75
Unexpended balance December 31, 1913		$327 85

TABLE A—III.

THE AMOUNT OF APPROPRIATION AND THE AMOUNT OF EXPENDITURES FOR ELECTRIC LIGHTING AND MAINTENANCE.

Original appropriation		$257,340 81
Appropriation from Contingent Fund (Board of Estimates)		444 60
Cash receipts for material and labor		346 86
		$258,132 27

EXPENDITURES.

Cost of operating arc lamps, all-night service overhead districts, as per contract	$93,179 76	
Cost of operating arc lamps, all-night service underground districts, as per contract	54,939 85	
Cost of operating arc lamps, half-night service underground districts, as per contract	5,702 20	
Cost of operating "White Way" all-night luminous arc lamps, as per contract	20,753 22	
Cost of operating "White Way" half-night luminous arc lamps, as per contract	12,477 28	
Amounts carried forward	$187,052 31	$258,132 27

Amounts brought forward	$187,052 31	$258,132 27
Cost of operating 24 marginal arc lamps, adjacent to parks and squares, as per contract	1,557 76	
Cost of operating 40 candle-power incandescent electric lamps in streets and alleys	16,641 60	
Electric current for incandescent lamps in markets and on bridges, meter measurement	6,714 16	
Electric current for incandescent lamps, Charles Street Boulevard, University Parkway and Thirty-ninth street, meter measurement	1,401 92	
Electric current for No. 6 Engine House clock	116 94	
Luminous "White Way" arc lamps	2,028 69	
Holders and cut-outs for lamps	106 41	
Tungsten and carbon lamps	561 36	
Time switches	261 00	
Repairing "White Way" arc lamp connections	1,331 28	
Connecting new arc lamps	803 66	
Transferring arc lamps	3,620 45	
Balance due Electric Company for installing "White Way" lamps	21,960 26	
Cost of subway connections for Charles Street Boulevard and University Parkway	1,306 22	
Electrical material and supplies	356 12	
Patterns, hardware and tools	342 83	
Wires and cables	457 50	
Special illumination for National Democratic Convention	8,677 98	
Special illumination for Eagles' and Ad Men's conventions	1,586 93	
Special illumination for Colored Knights of Pythias Convention	462 80	
Standardized incandescent bulbs	10 20	
Removing bases—underground lamps	19 75	
Team hire—hauling	4 50	
Expressage and freight	63 24	
"Alba" lamp globes	230 46	
Cement, granite, gravel and lumber	56 53	
Extra labor and salaries, incident to this account	323 63	
Miscellaneous items, advertising, photographs, blue printing, etc.	54 23	
Total expenditures		258,110 72
Unexpended balance December 31, 1913		$21 55

TABLE A—IV.

THE AMOUNT OF APPROPRIATION AND THE AMOUNT OF EXPENDITURES FOR NAPHTHA LAMPS AND MAINTENANCE.

Original appropriation	$9,312 00
EXPENDITURES.	
Total cost for maintaining and operating naphtha lamps, which includes rental of burners, mantles, fixtures, repairs and lamplighters' salaries, as per contract	8,088 23
Unexpended balance December 31, 1913	$1,223 77

TABLE A—V.

THE AMOUNT OF APPROPRIATION AND THE AMOUNT OF EXPENDITURES FOR INCIDENTALS.

Original appropriation		$350 00
EXPENDITURES.		
Advertising proposals	$78 59	
Postage stamps	51 35	
Printing annual report	38 30	
Premium—insurance on automobile	69 25	
Express and freight charges	28 57	
City directory	7 00	
Typewriting specifications	27 76	
Typewriter repairs	15 00	
Premium—indemnity bond	5 00	
Car fare	14 90	
Stationery	8 05	
Blue prints	4 98	
Notary fees	1 25	
Total expenditures		350 00

TABLE B.

SUMMARY SHOWING THE AMOUNT OF APPROPRIATIONS, EXPENDITURES AND BALANCES FOR THE YEAR ENDING DECEMBER 31, 1913.

ACCOUNT.	Amount of Appropriation.	Expended for the Year Ending Dec. 31, 1913.	Balances Dec. 31, 1913.
Salaries	$16,788 00	$16,506 51	$281 49
Gas lighting and maintenance	179,742 60	179,414 75	327 85
Electric lighting and maintenance	257,340 81	258,110 72	21 55
Electric lighting received from Contingent Fund	444 60		
Electric lighting received for labor and material	346 86		
Naphtha lighting and maintenance	9,312 00	8,088 23	1,223 77
Incidentals	350 00	350 00	....
Totals	$464.324 87	$462,470 21	$1,854 66

RECEIPTS, YEAR 1913.

Sales of old material	$44 32
Recovered damages	35 74
Total for year ending December 31, 1913	$80 06

TABLE C.

SHOWS THE AMOUNT REQUIRED FOR YEAR ENDING DECEMBER 31, 1914.

The appropriation for salaries will cover the expense of the office and inspectors	$16,996 00
The appropriation for gas lighting and maintenance will cover the cost of gas for street lamps, squares, markets, and bridges, rental of burners, incandescent mantles, fixtures and repairs, and salaries of lamplighters, transfer of lamps, keep of horses and wagons, street signs, labor, etc.	212,045 50
The appropriation for naphtha lighting and maintenance will cover the cost of gasoline and filling the fluid-burning lamps,. rental of burners, mantles, fixtures, repairs and salaries of lamplighters, transfer of lamps, etc.	9,504 00
The appropriation for electric lights will cover the cost of electric arc lights for the streets, squares, markets, bridges, and incandescent lights in No. 6 Engine House clock, bridges, markets, boulevards and for the transfer and alteration of lamps, etc.	283,422 55
Extension of "White Way" luminous arc lamp system	20,000 00
The appropriation for incidentals will cover the expense for advertising, Directory, postage, etc.	300 00
Total	$542,268 05

Total Cost of Street Lighting—1879 to 1913, Inclusive.

Year.	Gas.	Electric.	Naphtha.	Total.
1879	$151,338.53	....	$22,432.00	$173,770.53
1880	165,662.39	....	23,438.85	189,001.24
1881	223,210.13	....	22,534.45	245,744.58
1882	200,264.55	$21,959.95	21 304.99	243,529.49
1883	189,338.92	57,487.50	21,999.19	268,825.61
1884	199,830.69	58,156.70	21,977.09	279,964.48
1885	169,928.87	78,575.00	21,241.52	269,745.39
1886	139,995.52	110,457.20	22,445.52	272,898.24
1887	151,347.27	107,087.80	25,982,38	284,417.45
1888	189,881.13	103,298.12	22,181.42	315,360.67
1889	200,332.04	98,593.10	19,073.38	317,998.52
1890	195,309.67	85,280.12	16,249.03	296,838.82
1891	201,250.41	102,783.60	19,791.35	323,825.36
1892	210,907.14	124,374.35	12,670.57	347,952.06
1893	223,860.38	121,658.49	12,936.48	358,455.35
1894	223,294.73	126,783.24	12,906.92	362,984.89
1895	225,256.66	141,694.26	13,088.14	380,039.06
1896	220,423.63	165,991.33	14,237.37	400,652.33
1897	215,505.77	172,420.22	13,750.88	401,676.87
1898	212,697.44	173,855.55	12,997.20	399,550.19
1899	207,287.17	175,098.95	13,371.25	395,757.37
1900	140,203.30	164,335.63	17,148.25	321,687.18
1901	140,110.02	144,135.93	17,775.85	302,021.80
1902	139,480.98	157,485.12	27,228.76	324,194.86
1903	137,208.45	158,548.28	28,084.38	323,841.11
1904	135,345.59	160,081.27	24,650.14	320,077.00
1905	119,163.61	152,718.28	25,957.30	297,839.19
1906	121,786.95	111,462.94	28,125.47	261,375.36
1907	119,452.37	121,692.07	23,340.00	264,484.44
1908	139,472.70	129,263.78	19,960.19	288,696.67
1909	145,452.18	152,938.66	25,653.60	323,744.44
1910	145,934.04	177,358.55	26,586.41	349,879.00
1911	154,790.96	188,647.53	12,097.28	355,535.77
1912	162,727.81	191,438.79	9,791.44	363,958.04
1913	179,414.75	258,110.72	8,088.23	445,613.70

Number and Cost of Street Lamps—1879 to 1913, Inclusive.

Year.	Number of Gas Lamps.	Total Cost per Gas Lamp per Year.	Number of Gasoline Lamps.	Total Cost per Gasoline Lamp per Year.	Number of Electric Arc Lamps.	Total Cost per Electric Arc Lamp per Year.	Number of 32-60 C. P. Incand. Electric Lamps.	Total Cost of Incand. Electric Lamps per Year.
1879	4847	$39.18	998	$29.79	....	......	....	....
1880	5161	40.05	1011	28.52	....	......	....	....
1881	5346	40.32	1028	29.24	4	On trial	....	....
1882	4847	39.58	1033	28.87	225	$255.50	....	....
1883	5056	35.72	1006	29.93	225	255.50	....	....
1884	5191	36.93	1043	28.92	243	255.50	....	....
1885	4935	32.65	1074	28.00	409	255.50	....	....
1886	5013	26.17	1042	30.02	476	255.50	....	....
1887	5277	27.40	841	38.99	531	182.50	....	....
1888	5697	31.46	1405	23.49	584	182.50	....	....
1889	5822	32.48	1388	21.91	603	182.50 146.00	....	....
1890	5742	32.17	1272	21.20	667	127.75	....	....
1891	5237	36.37	1158	26.50	965	127.75	....	....
1892	5375	37.34	1050	21.80	1030	127.75	....	....
1893	5569	37.86	1055	21.81	1035	127.75	....	....
1894	5794	36.86	1047	21.83	1039	127.75	....	....
1895	5790	37.32	897	24.84	1278	127.75	....	....
1896	5928	35.47	980	24.98	1338	127.75	....	....
1897	6043	34.04	1026	23.10	1355	127.75	....	....
1898	6235	32.50	1072	21.55	1369	127.75	....	....
1899	6232	31.60	1085	21.82	1391	127.75	....	....
1900	6136	32.50	1109	21.82	1394	99.92	....	....
1901	6153	21.40	1038	20.08	1516	99.92	....	....
1902	6495	21.40	1109	28.50	1565	99.92	....	....
1903	6631	21.40	1089	23.45	1603	99.92	....	....
1904	6670	20.25	1147	23.45	1599	99.92	....	....
1905	6663	16.25	1043	23.45	1726	67.49	....	....
1906	6931	16.25	915	27.50	1741	67.49	....	....
1907	7169	16.25	890	27.50	1797	67.49	....	....
1908	7199	18.10	989	25.00	2102	67.49	....	....
1909	7483	17.25	1128	26.00	2529	67.49	....	....
1910	7769	17.25	790	26.00	1013	*60.25	....	....
					1556	†75.00	....	....
1911	7773	17.25	404	24.00	1489	*60.00	623	*$20.00
					1116	†74.00		
1912	8493	17.00	368	24.00	1555	*60.00	770	*20.00
					722	†74.00	216	†16.00
					84	‡68.00	60	†9.15
					202	§89.00	32	†18.00
					154	¶81.00	..	......
1913	9319	16.15	324	27.00	1574	*60.00	901	*20.00
					806	†74.00	216	†14.75
					84	‡68.00	60	†7.13
					260	§89.00	32	†23.64
					156	¶81.00	57	†18.42

*Overhead. †Underground. ‡Underground one-half night. §Luminous all night. ¶Luminous one-half night.

INVENTORY OF THE PROPERTY

OWNED BY THE CITY AND USED IN OPERATING THE STREET LIGHTING SERVICE ENDING DECEMBER 31, 1913.

On Streets.

416	"Baltimore" design luminous arc "White Way" posts and lamps.
12	Five-light cluster electric lamp posts.
8,995	Gas lamp posts.
5,475	"Miner" lanterns.
1,205	"Boulevard" lanterns.
206	Posts with street and hospital zone signs attached.
27,389	Glass and enamel street signs (estimated).
253	Ornamental "Baltimore" posts and lamps.
259	Ornamental "Baltimore" design electric lamp posts and globes.

City Hall (Cellar).

1,035	Enameled street signs.
100	"Miner lamps and frames.
1	Forge.
1	Anvil.
1	Brake.
4	Manville Stakes.
2	Sets block and tackle, one chain.
200	Two-inch lag bolts.
3	Crowbars.
3	Long-handled shovels.
1	Short-handled shovel.
1	Rammer.
200	Bricks.
1	Load sand.
95	Regular sign brackets.
1	"Clyde" sign-post.
1	Bag cement.
1	Lifting bar.
12	18-inch by ⅝-inch bolts.
29	1¼-inch couplings.
1	Double "Y."
1	Templet.
3	1¼-inch by ¼-inch bends.
4	¾-inch by 1¼-inch bends.
1	Rake.
38	¾-inch caps.

1 Candle power testing machine.
7 Three-quarter to one-half reducers.
1 Cubic foot box.
3 ¾-inch couplings.
2 1½-inch caps.
1 Roll wire.
6 Top boards for ornamentals posts.
20 Cut-out board for ornamental posts.
20 Cut-out boards for "White Way" posts.
5 Irons for "White Way" posts.
30 1¼-inch by ⅜-inch machine bolts.
1 Stand.
108 60-watt Mazda lamps.
107 40-watt Mazda lamps.
170 60-candlepower Mazda Lamps.
51 100-watt Mazda lamps.
3 Series sockets.
1 Globe.
500 Sign block numbers.
6 Dial plates.
2 Swedges.
1 Sledge hammer.
1 Stove.
1 Tongue.
1 Wheelbarrow.
1 Lot iron junk.
11 Small lamp globes.
63 Large lamp globes (six globes open top and bottom).
3 "Miner" boulevard lamps.
10 Reflectors.
1 Lot electrical wire..
6 Regular arms.
3 Step-ladders.
1 Drill press.
1 Derrick.
275 Feet of rope.
1 Large shear.
1 Roller.
1 Groover.
100 Old bracket signs and fixtures.
18 "Hospital Zone" signs.
2 Cable pulling heads.

1 Fire-pot.
1 Six-inch metal-pot.
1 Three-inch ladle.
1 Water bucket.
1 Machinists' vice.
1 Cement roller.
1 Cement groover.
1 Cement trowel.
1 Two-foot gas meter proover.
1 Electric meter testing bench.
27 Series lamp sockets (six without sockets).
1 Cable pot head without top.
2 Gross 1½-inch brass machine screws (14-20).
700 Expansion bolt shields.
4 Bars block tin.
30 Gross ⅝-inch roundhead brass machine screws (10-24).
27 Gross 10-24 hexagon brass tapped nuts.
50 Feet hard brass wire (for signs).
5 Rolls ¾-inch "Rex" black friction tape.
100 Feet ¾-inch pipe.
2 ¾-inch pipe crosses.
111 1½-inch pipe.
6 Meter post casings.
12 Five-opening brass fittings.
3 Stands for ornamental lamps.
4 Ventilators.
25 "Paiste" plug cut-outs, No. 2965.
7 Porcelain socket holders.
91 Feet 2-inch pipe.
33 1½-inch pipe crosses.
287 Old "Clyde" signs.
33 1½-inch to ½-inch reducers.
1 Reel No. 0 lead cable.

City Yard (Low Street).

113 Cross-arms.
36 Acorns for ornamental lamp posts
4 Ornamental lamp post bases
2 Regular lamp post bases
9 Regular lamp post urns
55 Bracket-arms.
13 Pine-apple post tops.

113 Standard iron posts.
1 Meter post.
7 Five-light cluster electric lamp posts (complete).
1 Lot old iron junk (estimated at 500 pounds).

City Yard (Hunter Alley).

6 "White Way" lamp posts.
3 Standard lamp posts.
20 Cross-arms.
1 Reel No. 6 lead cable.
1 Reel No. 8 lead cable.
2 Picks and four handles.
2 3¾-inch brick drills.
2 Pointers.
2 Chisels.
122 Block numbers.
2 Gallons black paint.
13 Two-inch to 1½-inch reducers.

Laboratory.

8 Newman time-clocks.
1 100-inch Dwyer Machine Company electric photometer.
1 "100" Letheby bar photometer.
1 Standard "Harcourt" pentane lamp.
1 Improved "Lowe" jet photometer.
1 Six-inch syphon water gauge
1 Round glazed test meter.
1 Square glazed test meter.
1 Water balanced recording pressure gauge.
1 "Taglibeau" open coal oil tester.
3 Hydrometers (oil).
3 25 C. C. syphon Burette tubes.
1½ Gross standard half-pint glass bottles.
8 Leather oil collector cases.
1 Balance stand
1 Hammer.
1 Screwdriver
1 "Underwood" typewriter.
1 Typewriter desk.
1 Metallic fire-proof record case.
1 Letter press and book.

1 Electrical volt meter.
1 Electrical am-meter.
1 Two-foot gas meter proover.
Miscellaneous glassware (Laboratory).
Necessary record books, etc.

In Electrical Laboratory.

3 Siemens & Halske D. R. precissions dynamometer type watt meters.
1 Siemens & Halske calibrating rheostat or load box.
1 Combination table for instrument testing and checking.
2 Form "P" portable current transformers.
1 Moving coil milli-voltmeter.
1 Moving coil voltmeter.
5 Manganin shunts—various ranges.

At Livery.

1 Horse, 1 robe, 1 buggy, 1 set harness, 1 blanket, whip, etc.

Annual Report
of the
Sewerage Commission
of the
City of Baltimore

1913

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER

1914

SEWERAGE COMMISSION

OF THE

CITY OF BALTIMORE

AMERICAN BUILDING

BALTIMORE, December 31, 1913.

HON. JAMES H. PRESTON,

Mayor of Baltimore.

SIR:

In accordance with Section 1, Chapter 349, Acts of the General Assembly of Maryland, 1904, which requires the Sewerage Commission to annually make to the Mayor a detailed statement of its work and expenditures, we beg to submit the following report:

The death of Mr. William D. Platt, on December 23, 1913, deprived the Commission of a most useful member, and the City of a faithful servant. He was one of those originally appointed by the Mayor of Baltimore, June 19, 1905, and upon the organization of the Commission was elected vice-chairman. In the performance of all his duties he was faithful and efficient, and because of his many estimable traits he was highly esteemed by his colleagues.

On December 31, 1913, Thomas J. Shryock was appointed to fill the vacancy caused by the death of William D. Platt.

ACCOUNTS AUDITED.

The books, accounts and vouchers of the Commission have been examined by the Baltimore Audit Company, from the date that the last report was submitted to you to the close of business December 31, 1913. The Audit Company reported that they had examined the books and accounts for 1913, which included the examination of original vouchers at the Comptroller's office in the City Hall, and are pleased to state that everything is correct.

EXPENDITURES, 1913.

A complete and detailed statement of disbursements for the year 1913 has been furnished the City Comptroller, as follows:

Administrative salaries	$27,773 19
Construction salaries	239,812 31
Pumping Station salaries	16,643 51
Disposal Plant salaries	22,014 02
Cement Laboratory salaries	6,042 86
Repairing and Cleaning Sewers salaries	12,035 15
Pumping Station expenses	10,625 00
Disposal Plant expenses	5,993 16
Cement Laboratory expenses	705 46
Repairing and Cleaning Sewers expenses	259 34
Special expenses	35,641 23
Construction	3,712,891 50
Amount expended in 1913	$4,090,436 73

The items, Salaries and Expenses of the Pumping Station, Disposal Plant and Repairing and Cleaning Sewers, aggregating $67,570.18, are in fact maintenance cost. As a large number of taxpayers are being served by their operations, these expenses should not be considered in connection with construction.

The details of the construction represented by this large sum are given in the report of the Chief Engineer, submitted herewith. The accomplishment of so much work under varying conditions and many obstacles, is evidence of the high efficiency of the Engineering Department, and also entitles the employes of the Administrative Department to much credit for their accuracy and promptness in handling the accounts and vouchers, as stated in the report of the Audit Company.

CONTRACTS LET IN 1913.

Sanitary Contract No. 107, Frank Bruno & Co.	$118,893 52
Sanitary Contract No. 108, W. H. Thompson Cons. Co.	19,833 20
Sanitary Contract No. 109, Carozza, Lavezza & Carozza.	97,702 43
Sanitary Contract No. 110, McCarthy & O'Herron.	147,768 94
Storm-water Contract No. 26, McCarthy & O'Herron.	258,222 45
Storm-water Contract No. 27, Ryan & Reilly.	39,610 05
Sanitary Contract No. 111, Middleton-Thompson Co.	157,763 40
Sanitary Contract No. 114, C. B. Clark & Co.	100,162 40
Sanitary Contract No. 115, Carozza, Lavezza & Carozza.	26,042 49
Sanitary Contract No. 116, Gallagher, Boyle & Bryan.	190,001 80
Storm-water Contract No. 28, Guild & Co.	97,993 10
Storm-water Contract No. 29, Whiting-Turner Cons. Co.	12,262 00
Sanitary Contract No. 117, W. H. Thompson Cons. Co.	51,658 75
Sanitary Contract No. 118, McCarthy & O'Herron.	77,069 70
Sanitary Contract No. 121, Whiting-Turner Cons. Co.	65,868 50
Storm-water Contract No. 30, McCarthy & O'Herron.	93,916 75
Sanitary Contract No. 113, John Dannini.	2,035 73
Storm-water Contract No. 31, Ryan & Reilly.	31,382 90
Sanitary Contract No. 120, Whiting-Turner Cons. Co.	55,947 50
Storm-water Contract No. 32, Guild & Co.	26,805 20
Sanitary Contract No. 119, Gallagher, Boyle & Bryan.	176,154 75
Sanitary Contract No. 122, James Ferry & Sons.	52,426 90
Storm-water Contract, No. 33, Ryan & Reilly Co.	103,303 20
Sanitary Contract No. 124, Carozza Brothers Co.	80,552 25
Storm-water Contract No. 34, James Ferry & Sons.	7,242 50
Sanitary Contract No. 112, Samuel T. Williams.	9,092 00
Sanitary Contract No. 128, McCarthy & O'Herron.	138,637 85
Total.	$2,238,350 26

DISPOSAL PLANT.

From time to time we have conferred with our Consulting Engineers as the work has progressed. As the Disposal Plant has only been put in operation to a limited extent, we thought it wise during the past year to have Mr. Rudolph Hering visit the plant and study its operation. He spent some time in making a thorough investigation of the problem presented, and has made a number of valuable suggestions, which either have been or will be acted upon. It is to be borne in mind that the highest degree of efficiency of the Disposal Plant is not likely to be reached until a larger proportion of the sewage of the City shall have been brought into treatment.

SLUDGE DISPOSAL.

In our last annual report reference was made to the possibility of the use of sludge as a fertilizing material. This question is still under investigation, and it is hoped that before long we shall have sufficient data to enable us to form a definite opinion on the subject. There is no doubt that sewage contains substances that are of importance in the cultivation of the soil; but it remains to be determined whether these can be separated from the sewage in sufficiently concentrated form at a sufficiently low cost to give them commercial value.

APPROPRIATIONS FOR FUTURE WORK.

The appropriation for sewer work for the year 1914 will exhaust the funds provided under the Sewerage Enabling Acts of 1904 and 1910. These two loans were intended to provide $20,000,000, but because the Sewerage Stock could not be disposed of at par at a rate of interest most advantageous to the City, the sum actually available for all purposes will be approximately $18,900,000. Nevertheless, the two loans would be sufficient to do the work of sewering and draining the built-up portions of the City and Annex, existing at the time the first estimates were made. These estimates will be found in the annual report of the Commission for 1907, which stated that the cost of the sanitary sewers as outlined in the report for 1906 would be about $14,000,000, and that the entire storm-water system could be properly constructed for about $4,500,000. These estimates were based upon a system of sewers designed to use the streets and alleys bringing a connection to every house in the City in such a way as to reduce the total number of miles of sewers to a minimum. The Legislature of 1910 passed an Act requiring the Commission to lay sewers in the alleys wherever practicable. It is estimated that this requirement increases the cost of the system about $1,000,000. When the first estimates were made, it was understood that the work of the Commission would stop at the outside building line. It has since been decided to carry the front connection to the inside of the wall of the building, enabling the owners of small properties to connect their buildings with the City's sewers at less cost to them, adding to the cost of the system for this item approximately $250,000. These changes, with the discounts on sales of Sewerage Stock, have reduced the amount considered available for construction of the sanitary and storm-water systems as contemplated in the original estimates, making the extension of sewers in the rapidly developed outlying portions of the City a serious problem with which to deal. The Commissioners for Opening Streets during the year made request for drainage construction in streets outside of the territory included in the original plan. The City Solicitor had advised them that the Act placed on the Sewerage Commission the duty of providing for the sewerage and drainage in connection with the new streets in the Annex. The Sewerage Commission was obliged to inform the Commissioners for Opening Streets that a certain amount of work had been planned in the built-up sections of the City which would exhaust all of the remaining funds. Moreover, it would be most unfair to the taxpayers residing in the congested section of the City, who had been paying taxes for years, to go into the outlying parts where houses were few and far between and expend the money remaining at our disposal for drains, thus depriving the crowded sections of the City of much-needed sewerage privileges. In order to provide sewers and drains for these outlying districts, a further appropriation will be necessary to replace the funds the Commission was deprived of by shrinkage in the amount available on account of the above items. It is safe to say that the work can be brought to a state that might be called practical completion, with the further appropriation of $3,000,000. It appears to the Commission that the extension of the sewers can be done more economically and promptly by the present organization (both administrative and engineering) than later on taking it up under a new organization.

Respectfully,

CHARLES ENGLAND, *Chairman.*
JAMES H. PRESTON, *Ex officio.*
MORRIS WHITRIDGE.
IRA REMSEN.
WILLIAM B. KINES.
GUSTAV SIEGMUND.
THOMAS J. SHRYOCK.

HARRY W. RODGERS, *Secretary.*

ANNUAL REPORT

OF THE

CHIEF ENGINEER

FOR THE YEAR 1913

BALTIMORE, December 31, 1913.

MR. CHARLES ENGLAND, *Chairman; and*
Gentlemen of the Sewerage Commission.

DEAR SIRS:

I have the honor to present to you a report upon the work done by the Engineering Department of the Commission from January 1, 1913, to December 31, 1913.

The total value of the work completed during the year was about $3,875,000. This embraces 139 miles of sewers, drains and house-connections, varying in size from 5 inches to 29 feet in diameter, in the beds of the streets and alleys of the City, and 1,541 catch-basins, and includes such work as the enclosing of Jones Falls, the diversion tunnel under Guilford avenue, the large 12x18-foot storm-water drain in Linwood avenue, and 18 acres of extensions and improvements to the Disposal Plant.

The difficulties and details necessary in constructing this amount of sewers and drains, in streets and alleys filled with all kinds of obstructions, is difficult to make clear to a layman, but is fully appreciated by engineers.

The sewer construction in Baltimore is further greatly complicated because of the Enabling Act requiring all sewage to be purified, necessitating the separating of the storm-water from the sanitary sewage, thereby requiring the building of two separate systems of sewers and drains, crossing and recrossing each other in thousands of places. The supporting of buildings and taking care of the surface drainage and traffic is also a difficult problem, considering the scope of the work. The number of complaints, compared to the amount of work, shows that the work has been carried on with the minimum amount of interference with corporations, other City Departments, property-holders and traffic. The few law suits that have been instituted against the City, in connection with our work, have resulted in the City winning practically all of the cases, with one or two small exceptions.

JONES' FALLS.

The construction of the Jones' Falls Conduits has been completed from 100 feet south of Baltimore street, at which point the drainage problem has been solved, to the chamber at the entrance to the tunnel between Biddle and Chase streets, a distance of 5,484 feet, redeeming 428,300 square feet of land in the heart of the City, eliminating ten street bridges and one double-track railroad bridge and making possible the redemption of 175,000 additional square feet of land and the elimination of two additional railroad bridges.

This work, being in the bed of a running stream, subject to sudden floods, has been a most trying piece of construction, and it is therefore with considerable gratification that I am able to report it has been completed without law suits or serious loss to the contractor.

DIVERSION TUNNEL UNDER GUILFORD AVENUE.

The diverting of the Falls at a point in front of Union Station into a 29-foot tunnel under Guilford avenue, effected a very large saving by eliminating the long bend in the Falls, shortening the construction about 700 feet and giving a large quantity of excellent rock from the tunnel for the concrete necessary in the construction, which factor secured a much lower bid from the contractor, and effected a saving to the City of approximately $150,000.

The tunnel is 75 per cent. completed—the excavation at the southerly end being within 110 average feet of the the retaining wall of the Falls, between Biddle and Chase streets; the northerly end being within 97 average feet of the retaining wall in front of Union Station, and the concrete lining having been completed for a distance of 574 feet.

The difficulties the contractor has encountered in this construction have been many, and I regret to say that the subcontractor, Lane Brothers Company, is one of the few contractors we have had to fail on us during the expenditure of some seventeen million dollars, involving many difficult pieces of construction. The original contractors, Fisher & Carozza, however, took over the work promptly and are pushing it in a much better manner that the sub-contractor was doing.

I am pleased to say, further, that for the past year we have been carrying the flow of Jones' Falls through the east conduit, which was built for the ordinary flow, and although this conduit is the smallest of the three, on account of the smooth bore and calculated grades it has been able to take care of practically all the heavy storms we have had, which verifies our calculations in a most satisfactory manner.

PUMPING STATION.

It is a pleasure to report that the three 27,500,000-gallon pumps, which were put into operation on January 31, 1912, have worked in a most perfect manner since that time, and have been one of the means of relieving the odor from the harbor until we were able to intercept a sufficient amount of sewage to give permanent relief. This was done by intercepting a large portion of the flow of Jones' Falls and pumping in to the Disposal Plant, there purifying it. On account of the rapid introduction of the sewerage system around the harbor, allowing us to intercept the sewage flowing into the harbor, we were able to discontinue the pumping of water from Jones' Falls on May 30, 1913. A sufficient number of houses in the low-level district have been connected to require the employment of three shifts at the Pumping Station, keeping the force at work day and night.

DISPOSAL PLANT.

At the time of starting the construction of the sewerage system we found available $10,000,000 in bonds, being half of the amount necessary, according to our estimate. Not knowing whether sufficient funds to complete the entire system would become available later on, I endeavored to lay out the expenditure of this money in such a way, by building a certain amount of sewers in the City with a sufficiently large Disposal Plant at Back River, as to make the expenditure available as a working plant as far as the money went. This resulted in our constructing a Disposal Plant at Back River capable of taking care of 275,000 people. Immediately on the voting of the additional funds to complete the system (which loan, I am informed, passed by the largest vote ever received in the City of Baltimore), plans were made to bring the Disposal Plant up to a capacity of 600,000 people. Work on this extension has progressed in a satisfactory manner during the year. In the extension, improvements in detail have been made, and the plant is being kept up to the very latest word in sewage disposal, both in this country and abroad. The power and light secured by the flow of the sewage are giving most satisfactory results.

We have turned over to the Health Department about 40,000 houses for connection to the sewers and will have ready in a short time about 20,000 more. I understand that over 30,000 houses have been connected and are now draining to the Disposal Plant.

HYDRO-ELECTRIC PLANT.

In designing the Disposal Plant, arrangements were made to insert turbines at the point where the purified sewage was ready to be discharged into Back River. The flow of the purified sewage operates these turbines, which in turn run dynamos, producing more than sufficient power and light to operate the plant—a feature that stands out unique in sewage disposal, Baltimore being the only place where such power is secured.

FALLSWAY VIADUCT.

In accordance with the action of the Mayor and the Board of Estimates, employing me as Consulting Engineer to carry out the construction of the Viaduct, which action was approved by your Commission, I proceeded and designed the Viaduct along the general lines recommended in my report to the Commission in 1906.

This Viaduct is for the purpose of lifting the road-bed of the Fallsway, constructed over the top of the Jones' Falls reinforced conduits, from the present crossing of Madison street at the intersection of the Falls, to the present grade of Eager street, Chase street and Guilford avenue, crossing the Northern Central tracks above grade.

This contract was awarded to Stewart-Jones Company and Claiborne, Johnston & Company, at their bid of $190,693.15. Later, through the sanction of the City Solicitor, the bonding companies and the Board of Estimates, the Stewart-Jones Company dropped out, leaving the work in the hands of Claiborne, Johnston & Company.

This contract covered the superstructure, over the roof of the conduits, as the foundations had been previously authorized by the Board of Estimates, after arranging with your Commission to construct them in conjunction with the building of the conduits in the bed of the Falls, it being more economical to build the foundations for the Viaduct into the roof of the conduits while the latter were in process of construction. These foundations were constructed at the low unit prices obtained in the conduit work, the cost amounting to about $25,000. Payment for this work is being made by the Commission on monthly estimates, to the contractor for Section No. 2 of the Jones' Falls Conduits, and upon its completion the amount expended is to be repaid to the Commission from the funds apropriated for the construction of the Fallsway.

In designing the Viaduct, the first 438 feet, from Madison street north, starting at nothing and rising to a height of 15½ feet, was of such construction as would not permit of the building of arches from an architectural standpoint. It was designed so as to have the roadway of this portion laid on a fill between retaining walls. In place of letting a contract for the filling in of this space at additional cost to the City, I recommended that this be made a central dump, charging a price per load for dumping earth, thereby receiving a revenue instead of making an expenditure. This fill is proceeding in a very satisfactory manner, and arrangements have just been made with large contractors to begin running the dirt in very rapidly. Therefore, if the weather permits, in the course of a very short time I do not see why traffic cannot be diverted over the portion of the Viaduct from Eager street south, ahead of the paving, if so desired. However, it would be better if arrangements could be made to pave this section ahead of the other paving, immediately on our releasing it, which will be in advance of the fill being completed, if the weather conditions are favorable. This would be desirable from several standpoints. In this connection, careful consideration should be given to the question of the advisibility of using bituminous joints in the paving of the Viaduct, for two reasons: First, we have expansion joints in the floor slab, which will be quite a factor in the future, and bituminous joints in the paving will allow the expansion and contraction to take place much better than a cement joint; second, it will reduce the noise, which is now complained of on the lower section of the Fallsway, where cement filler was used.

While the work on the Viaduct has not moved along as rapidly as desirable, the section between Madison and Eager streets has been a particularly tedious part. The contractor having assembled his plant, from now on, up to the mouth of the tunnel, there is no reason why the work should not proceed much more rapidly. I am pushing the contractor with this object in view.

In this connection, I wish to say that the Pennsylvania Railroad has co-operated with us in a most satisfactory manner, with reference to the adjustment of their tracks at the crossing of the Viaduct.

DESIGNING DEPARTMENT.

On account of the lack of information regarding underground structures, the very extensive ramifications of the sewerage system, the effort to interfere as little as possible with existing structures, and in order to give the contractor as much information as possible in making his bid, we have necessarily had to make extensive investigations of the records of all the City Departments and public service corporations; and, in addition, sink numerous test-pits. This has resulted in adding to our engineering cost, but it has been the means of effecting large savings to the City, by the contractors giving lower prices on account of having this information, and will result in the City having one of the most complete underground maps of any city in the country. It has also enabled us to do our work with the least possible interference with the structures of other City Departments and public service corporations. This has involved, since the beginning of the work, the preparation of 10,500 drawings. Included in this number are 107 record plats which have been entirely completed, and 383 partially completed. These plats, which form the foundation of our contract drawings, show street, lot and curb lines, existing sewers and drains, tracks, pipes and other structures, with depths, sizes and materials.

During the year 1913 we have passed nearly 19,500 permits for connections to the new sewers, requiring the giving of depth and location, and have examined about 2,500 plans submitted by the other City Departments, public service corporations, etc., to see that the proposed structures did not interfere with our work. In addition, about 2,000 plans were furnished for our information by the Gas Company, Telephone Company, etc. Since the beginning of our work, about 15,000 original drawings have been submitted by outside parties, either for approval or for our information, and about 10,000 additional duplicate drawings have been received, showing revisions or changes from the plans originally submitted, making a total of about 25,000 separate outside drawings passed on since our work began.

In planning and executing such work as the Baltimore Sewerage System, either one of two diametrically opposed policies may be followed:

First—The plans and preliminary investigations may be of the most general character, leaving it to the contractor to make detailed investigations and to assume all risks of unknown conditions. If this plan is followed the contractor's prices are necessarily high, in order to cover contingencies.

Second—The plans and preliminary studies may be made in great detail, showing, so far as possible, all underground conditions and obstructions, and leaving as few things as possible to be covered by the contractor's allowance for contingencies. This method results in the lowest prices from the contractors and has been adopted by the Sewerage Commission, with the result that we have secured very wide competition and generally low prices on all of the work which has been done. The saving secured by the lower prices has been many times greater than the additional cost of preparing the plans along the above lines.

TESTING STATION.

The Sewerage Commission's method of testing their cement and having a complete laboratory producing satisfactory results caused the Mayor and Board of Estimates to decide to place the testing of all cement purchased by the City's contractors under the jurisdiction of the Sewerage Commission. The Sewerage Commission having agreed to this proposition, our cement laboratory force was moved to the City Testing Station in July, 1912. During 1913 the laboratory sampled and tested 2,215 lots (representing 1,810,593 bags) of cement. The larger part of the cement tested was sampled in dealers' warehouses, and each bag was tagged, as the cement was intended to be sold in small quantities to different contractors. The cost of this work (sampling, tagging and testing) was unusually low, amounting to about three-quarters of a cent per bag. Where the cement was purchased in large lots to be used on specific pieces of work, the bags were not tagged, and the cost of sampling and tagging each lot of cement amounted to only $2.04. The Commission bills the cost of operating the Cement Laboratory against the various departments by which the cement is used, the charge to each department being based on the amount of cement used by it.

The brands tested embrace the following: Alpha, Atlas, Dexter, Dragon, Edison, Giant, Lehigh, Matcham, Nazareth, Saylor, Security, Tidewater, Universal, Vulcanite and Whitehall.

PHOTOGRAPHY.

In the subway construction in New York we found that the use of photography was a most important factor in our engineering work in saving money to the city in law suits. This feature was introduced in the Sewerage Commission's work from the very start and has resulted in producing evidence that has thwarted a great many law suits and enabled the City to win many others. Our method has been to carefully examine buildings before our work was started, and in the case of any defects, have them photographed; also, elevations taken on curbs and sills. While this has added to the first cost, it has, as stated above, enabled us to save large sums to the City.

NEW PAVING.

In order to meet the strenuous program of paving adopted by His Honor, the Mayor, I am gratified to report that we have been able to keep well in advance of the paving. On December 12, 1913, we called the attention of the Paving Commission to the fact that we had released about 37 miles of streets, in addition to those they had asked us for, which were then available for paving. Since then, we have released additional streets and are about ready to release a considerable number of miles more. This has only been possible by the most strenuous work on the part of everyone connected with the Sewerage Commission.

The pushing of the paving so closely behind such extensive sewerage and drainage work has placed the Commission in a very critical position, as the settlement of these trenches, covering such a tremendous area through various kinds of soils and under masses of pipes, makes a contingency that we have used every effort to overcome. It is therefore gratifying to have had practically no replacing of new pavements over our trenches, demonstrating that unusual care has been exercised in our backfilling.

The proper construction and efficiency of sewers and drains depends on carefully constructing them on calculated grades; and the further fact that sewer work is so quickly covered, makes it a class of work requiring most careful inspection, from both an engineering and inspection standpoint.

I have introduced 50 photographs and 5 tables showing the actual work in progress, in detail, which will give the layman a better idea of the magnitude and variety of the engineering work.

Respectfully submitted,

CALVIN W. HENDRICK,
Chief Engineer.

TABLE No. 1.

PERSONNEL OF CHIEF ENGINEER'S STAFF.

Name.	Title.	Entered Service.	Remarks.
Thomas D. Pitts	First Assistant	June 4, 1906	
Oliver W. Connet	Division Engineer	Jan. 2, 1906	
Alfred H. Hartman	Division Engineer	Jan. 15, 1906	
H. C. McRae	Division Engineer	Jan. 21, 1907	
W. A. Megraw	Office Engineer	Dec. 3, 1906	Promoted from Asst. Div. Engr. Jan. 1, 1913.
F. H. Cronin	Mechanical Engineer	May 9, 1911	
John J. Neal	Asst. Mech. Engineer	Nov. 9, 1906	Trans. from Asst. Engr. "AA" Jan. 1, 1913.
John J. Frederick	Secretary	Oct. 1, 1905	
J. Fletcher Apsey	Asst. Div. Engineer	Jan 15. 1906	Resigned May 5, 1913.
R. L. Burwell	Asst. Div. Engineer	June 24. 1907	
Milton J. Ruark	Asst. Div. Engineer	Jan. 22, 1906	Promoted from Asst. Eng. "AA" Jan. 1, 1913.
Elliott H. Burwell	Asst. Div. Engineer	Jan. 15, 1906	Promoted from Asst Engr. "AA" May 1, 1913.
Gustav J. Requardt	Asst. Div. Engineer	June 23. 1909	Promoted from Asst. Engr. "A" May 1, 1913.
Covington K. Allen	Asst. Engineer "AA"	June 1, 1907	Resigned July 1, 1913.
Henry S. Shryock	Asst. Engineer "AA"	May 1, 1906	
Arthur C. Toner	Asst. Engineer "AA"	Jan. 15, 1906	Resigned Dec. 31, 1913.
F. W. McKinney	Asst. Engineer "AA"	Jan. 1, 1912	Resigned June 16, 1913.
Henry S. Regester, Jr.	Asst. Engineer "AA"	Jan. 15, 1906	Promoted from Asst. Engr. "A" June 16, 1913.
Frank H. Firoved	Asst. Engineer "AA"	Jan. 23, 1906	Promoted from Asst. Engr. "A" Jan. 1, 1913.
Frank J. Parran	Asst. Engineer "A"	May 28, 1907	
Harry F. Schaefer	Asst. Engineer "A"	June 20. 1907	
John Moore, Jr.	Asst. Engineer "A"	May 16, 1907	
Robert Rumbold	Asst. Engineer "A"	Feb. 1, 1906	
F. D. Christhilf	Asst. Engineer "A"	July 7. 1909.	

TABLE No. 1—*Continued.*

PERSONNEL OF CHIEF ENGINEER'S STAFF.

Name.	Title.	Entered Service.	Remarks.
J. Elmer Shepperd	Asst. Engineer "A"	July 2, 1906	
C. Boone Sadler	Asst. Engineer "A"	Aug. 1, 1907	
Edmund P. Burke	Asst. Engineer "A"	Mar. 27, 1912	
S. M. Klein	Asst. Engineer "A"	Jan. 8, 1912	Resigned May 15, 1913.
Ralph Hutchins	Asst. Engineer "A"	Feb. 1, 1906	Promoted from Asst. Engr. "B" April 1, 1913.
J. H. Ensey	Asst. Engineer "A"	Nov. 29, 1911	Promoted from Asst. Engr. "B" Aug. 1, 1913.
G. Herman Carl	Asst. Engineer "A"	Aug. 1, 1911	Promoted from Asst. Engr. "B" Jan. 15, 1913.
J. M. Bandel	Asst. Engineer "A"	Mar. 18, 1912	Promoted from Asst. Engr. "B" Aug. 1, 1913.
Irving P. Kane	Asst. Engineer "A"	May 22, 1912	Promoted from Asst. Engr. "B" Jan. 15. 1913.
C. I. Haven	Asst. Engineer "A"	June 17, 1912	Promoted from Inspr. "C" to Inspr. "B" May 1, 1913; to Asst. Engr. "A" July 1, 1913.
George W. Townsend	Asst. Engineer "A"	Nov. 18, 1907	Promoted from Draftsman "A" Jan. 1, 1913.
S. O. S. Graham	Asst. Engineer "A"	May 21, 1913	
Leslie C. Frank	Asst. Engineer "A"	Aug. 1, 1911	Resigned Oct. 15, 1912; reappointed Sept. 17, 1913.
J. Wightman Cleaveland	Asst. Engineer "B"	Dec. 24, 1906	
J. Milton Knight	Asst. Engineer "B"	Aug. 4, 1908	
J. Lee Chapman	Asst. Engineer "B"	Nov. 15, 1911	Resigned July 1, 1911.
R. Taylor Tunstall	Asst. Engineer "B"	Jan. 15, 1906	
Harry M. Webb	Asst. Engineer "B"	June 1, 1909	
J. S. Thompson, Jr.	Asst. Engineer "B"	Oct. 3, 1911	
Paul Wroth	Asst. Engineer "B"	May 19, 1908	
H. W. Johenning	Asst. Engineer "B"	June 24, 1908	
Thomas W. Sasscer	Asst. Engineer "B"	May 20, 1908	Promoted from Inspector "C" May 1, 1913.
W. S. Wicker	Asst. Engineer "B"	June 4, 1912	Promoted from Inspector "C" to "B" July 1, 1913; transferred to Asst. Engr. "B" Nov. 15, 1913.

TABLE No. 1—*Continued.*

PERSONNEL OF CHIEF ENGINEER'S STAFF.

NAME.	TITLE.	ENTERED SERVICE.	REMARKS.
E. B. Gilmour	Asst. Engineer "B"	June 12, 1911	Promoted from Draftsman "C" to "A" Jan. 1, 1913; transferred to Asst. Engr. "B" May 1, 1913.
Carroll Edgar	Asst. Engineer "B"	Oct. 4, 1912	Promoted from Draftsman "C" May 1, 1913.
Julius O. Ziegfield	Asst. Engineer "B"	April 18, 1912	Promoted from Draftsman "C" Sept. 15, 1913.
Dudley G. Frazer	Asst. Engineer "B"	Aug. 1, 1911	Promoted from Rodman "A" July 1, 1913.
William J. Frere, Jr.	Asst. Engineer "B"	June 6, 1911	Promoted from Rodman "A" July 1, 1913.
William C. Briscoe	Asst. Engineer "B"	Nov. 16, 1909	Promoted from Rodman "A" Jan. 15, 1913.
Adam W. Gerlach	Asst. Engineer "B"	June 16, 1909	Promoted from Stenog. "A" April 1, 1913.
W. L. Prout	Asst. Engineer "B"	April 5, 1911	Promoted from Stenog. "A" May 1, 1913.
H. G. Maynard	Asst. Engineer "B"	June 23, 1909	Promoted from Inspector "C" to "B" Feb. 15, 1913; transferred to Asst. Engr. "B" Nov. 15, 1913.
C. J. Hellen	Asst. Engineer "B"	June 12, 1911	Promoted from Rodman "A" Oct. 1, 1913.
Edward F. Davis	Inspector "A"	Dec. 24, 1906	
Charles S. York	Inspector "A	Nov. 7, 1906	
John H. Sothoron	Inspector "A"	July 5, 1907	
Charles I. Hammond	Inspector "A"	Nov. 7, 1906	
Aulbin D. Tapscott	Inspector "A"	Nov. 19, 1906	
George T. Robinson	Inspector "A"	June 1, 1907	Resigned Aug. 1, 1913.
Walter J. Caple	Inspector "A"	July 5, 1907	Resigned Nov. 30, 1913.
John C. Strohm	Inspector "A"	Jan. 15, 1906	Promoted from Inspector "B" Aug. 1, 1913.
Stephen A. Lusby	Inspector "B"	April 6, 1907	
Henry A. Albert	Inspector "B"	June 1, 1907	

TABLE No. 1—*Continued.*

PERSONNEL OF CHIEF ENGINEER'S STAFF.

NAME.	TITLE.	ENTERED SERVICE.	REMARKS.
John F. Garrett	Inspector "B"	Nov. 16, 1906	
Karl E. G. Kaufman	Inspector "B"	Jan. 15, 1906	
F. DeWolf Theobald	Inspector "B"	Aug. 9, 1907	
George E. Schaeffer	Inspector "B"	Aug. 11, 1908	
E. B. Richards	Inspector "B"	Jan. 15, 1906	Resigned Oct. 15, 1913.
J. H. Gambrell	Inspector "B"	Jan. 15, 1906	
William H. Bell	Inspector "B"	Dec. 19, 1906	
William Byrd	Inspector "B"	June 1, 1907	Promoted from Inspector "C" Jan. 1, 1913.
George B. Roberts	Inspector "B"	June 23, 1909	Promoted from Inspector "C" Aug. 1, 1913.
Lawrence H. Francis	Inspector "B"	Jan. 15, 1906	Promoted from Inspector "C" June 16, 1913.
William F. Dolliver	Inspector "B"	July 7, 1909	Promoted from Inspector "C" May 1, 1913.
Norman E. Brice	Inspector "B"	May 25, 1912	Promoted from Inspector "C" May 1, 1913.
E. W. Magruder	Inspector "B"	June 13, 1912	Promoted from Inspector "C" May 1, 1913; resigned May 15, 1913.
R. E. L. Martin	Inspector "B"	April 18, 1912	Promoted from Inspector "C" July 1, 1913.
Claude R. Whitaker	Inspector "B"	April 1, 1912	Promoted from Inspector "C" July 1, 1913.
A. I. Mulliken	Inspector "B"	July 21, 1913	Promoted from Inspector "C" Dec. 1, 1913.
J. C. Marlatt	Inspector "B"	May 16, 1912	Promoted from Inspector "C" May 1, 1913.
William A. Brogden	Inspector "C"	Nov. 7, 1906	
Henry Kelly	Inspector "C"	July 17, 1907	Dropped June 4, 1913.
A. S. Bartholomaei	Inspector "C"	Oct. 9, 1907	
William J. Boyle	Inspector "C"	April 16, 1907	Dropped April 1, 1913.
Martin W. Garrett	Inspector "C"	July 19, 1908	
John Lynch	Inspector "C"	June 1, 1909	
John Dougherty	Inspector "C"	May 17, 1909	

TABLE No. 1—*Continued.*

PERSONNEL OF CHIEF ENGINEER'S STAFF.

NAME.	TITLE.	ENTERED SERVICE.	REMARKS.
D. W. Glass	Inspector "C"	Dec. 26, 1911	Promoted from Inspector "D" April 1, 1913; resigned Oct. 1, 1913.
William Wagner	Inspector "C"	Jan. 15, 1906	
John T. Merritt	Inspector "C"	Nov. 29, 1911	
W. Knight Potter	Inspector "C"	Oct. 3, 1911	
W. K. Vickers	Inspector "C"	Oct. 17, 1911	
Stuart Anderson	Inspector "C"	Feb. 5, 1912	
A. J. Carey	Inspector "C"	May 14, 1912	Promoted from Inspector "D" April 1, 1913.
Newell D. Chase	Inspector "C"	April 3, 1912	Resigned Oct 31, 1913.
Louis Cremona	Inspector "C"	May 1, 1912	
H. R. Devilbiss	Inspector "C"	May 8, 1912	Promoted from Inspector "D" April 1, 1913.
L. N. Fisher	Inspector "C"	June 17, 1912	Resigned Sept. 23, 1913.
Alfred P. Gwynn	Inspector "C"	Oct. 24, 1912	Promoted from Inspector "D" May 1, 1913.
Thomas S. Hauch	Inspector "C"	May 7, 1912	Resigned Feb. 18, 1913.
William E. Hearing	Inspector "C"	Mar. 14, 1912	
George Kenly	Inspector "C"	Oct. 3, 1912	Promoted from Inspector "D" April 1, 1913;
L. F. Magness	Inspector "C"	June 17, 1912	Resigned Sept. 1, 1912; reappointed June 24, 1913; resigned Sept. 1, 1913.
Vincent T. Malcolm	Inspector "C"	April 24, 1912	
Kenneth T. Murphy	Inspector "C"	June 25, 1913	Promoted from Inspector "D" Dec. 15, 1913.
H. H. Tunis	Inspector "C"	June 19, 1913	
C. O. Boyd	Inspector "C"	June 23, 1913	
George R. Roberts	Inspector "C"	July 14, 1913	Resigned July 26, 1913.
R. D. Welsh	Inspector "C"	June 24, 1913	Promoted from Rodman "A" Dec. 15, 1913.
E. C. Densten	Inspector "C"	July 21, 1913	

TABLE No. 1—*Continued.*

PERSONNEL OF CHIEF ENGINEER'S STAFF.

NAME.	TITLE.	ENTERED SERVICE.	REMARKS.
W. C. Geissler	Inspector "C"	July 24, 1913	Promoted from Inspector "D" Dec. 15, 1913.
R. E. Turley	Inspector "C"	July 22, 1913	Promoted from Inspector "D" Dec. 15, 1913.
W. T. Stone	Inspector "C"	Aug. 1, 1913	Resigned Aug. 30, 1913.
Martin G. Shields	Inspector "C"	April 18, 1913	
A. A. Dyer	Inspector "C"	April 18, 1913	
Chas. Hildebrand, Jr.	Inspector "C"	Sept. 4, 1913	Promoted from Inspector "D" Dec. 1, 1913.
R. B. Warren	Inspector "C"	Nov. 6, 1912	Promoted from Inspector "D" Oct. 1, 1913.
John Yearwood	Inspector "C"	May 15, 1913	
Roland W. Bates	Inspector "C"	April 15, 1913	
C. W. Henderson	Inspector "C"	July 7, 1909	Resigned Sept. 18, 1909; reappointed April 21, 1913.
J. K. Bosee	Inspector "C"	April 21, 1913	Promoted from Inspector "D" Aug. 15, 1913.
W. C. Begg	Inspector "C"	July 24, 1913	Promoted from Inspector "D" Dec. 15, 1913.
F. H. Plack	Inspector "C"	June 16, 1913	Promoted from Inspector "D" Dec. 1, 1913.
C. M. Fuller	Inspector "C"	June 16, 1913	Promoted from Inspector "D" Dec. 1, 1913.
S. A. Merriam	Inspector "C"	June 5, 1913	Dropped July 16, 1913.
G. G. B. Nelson	Inspector "C"	Mar. 18, 1912	Laid off Jan. 1, 1913.
J. A. Reynolds	Inspector "C"	Oct. 17, 1912	
Joseph W. Rogers	Inspector "C"	April 24, 1912	Resigned April 22, 1913.
H. T. Sasscer	Inspector "C"	June 6, 1912	Promoted from Inspector "D" April 1, 1913.
Charles P. Schlarb	Inspector "C"	June 1, 1912	Promoted from Inspector "C" Feb. 1, 1913.
John E. Sheridan	Inspector "C"	Feb. 16, 1912	
Ballard R. Smith	Inspector "C"	June 1, 1912	Promoted from Inspector "D" June 1, 1913.
C. F. Tausky	Inspector "C"	Mar. 20, 1912	
G. E. Warren	Inspector "C"	June 17, 1912	Resigned April 1, 1913.

TABLE No. 1—*Continued.*

PERSONNEL OF CHIEF ENGINEER'S STAFF.

Name.	Title.	Entered Service.	Remarks.
L. B. Williams	Inspector "C"	Oct. 25, 1912	Resigned Mar. 17, 1913.
L. Chase Wright	Inspector "C"	June 17, 1912	Resigned April 15, 1913.
W. Howard Corddry	Inspector "C"	May 1, 1912	Promoted from Draftsman "C" April 1, 1913.
M. W. Loving	Inspector "C"	June 25, 1912	Promoted from Draftsman "C" Dec. 1, 1913.
L. Carroll Miller	Inspector "C"	Jan. 25, 1906	Promoted from Rodman "A" Sept. 1, 1913.
Edwin H. Nordman	Inspector "C"	April 17, 1912	Promoted from Rodman "A" Jan. 1, 1913.
Charles W. Rose	Inspector "C"	Oct. 14, 1912	Promoted from Rodman "A" July 1, 1913.
S. T. W. Green	Inspector "C"	Jan. 2, 1912	Promoted from Rodman "B" to Rodman "A" Jan. 1, 1913, to Inspector "C" July 1, 1913.
L. E. Massey	Inspector "D"	Nov. 6, 1912	Resigned Mar. 17, 1913.
J. Robert Owens	Inspector "D"	April 15, 1912	
L. D. Sasscer	Inspector "D"	May 15, 1912	
M. J. Slingluff	Inspector "D"	Oct. 14, 1912	
Edwin J. Wolfe	Inspector "D"	June 1, 1912	
E. Bernard Green	Inspector "D"	April 10, 1912	Promoted from Rodman "B" Aug. 1, 1913.
E. H. Howard	Inspector "D"	Mar. 8, 1912	Promoted from Rodman "B" April 15, 1913.
Herbert N. Chipchase	Inspector "D"	Nov. 1, 1911	
H. C. Brooks	Inspector "D"	Oct. 16, 1912	
J. B. Maguire	Inspector "D"	Oct. 11, 1912	
W. G. Nicholson	Inspector "D"	May 15, 1913	Dropped June 26, 1913.
J. C. Spedden	Inspector "D"	May 19, 1913	
P. R. Powell	Inspector "D"	June 9, 1913	Resigned Dec. 31, 1913.
H. W. Driver	Inspector "D"	June 18, 1913	Resigned Sept. 15, 1913.
D. S. Craig	Inspector "D"	June 23, 1913	Resigned Nov. 10, 1913.
L. V. Keeler	Inspector "D"	June 23, 1913	

TABLE No. 1—*Continued.*

PERSONNEL OF CHIEF ENGINEER'S STAFF.

Name.	Title.	Entered Service.	Remarks.
George F. Shaw	Inspector "D"	July 28, 1913	
John T. Brooks	Inspector "D"	Sept. 8, 1913	Resigned Sept. 20, 1913.
C. A. Kastendike	Inspector "D"	Sept. 6, 1913	
J. K. Kearney	Inspector "D"	Oct. 22, 1913	
Theo. C. Schaetzle	Inspector "D"	July 29, 1913	
William R. Seth	Inspector "D"	Oct. 6, 1913	
Claude A. Murphy	Draftsman "A"	Jan. 15, 1906	
Maurice F. Rodgers	Draftsman "A"	Dec. 1, 1905	
Clarence G. Harig	Draftsman "A"	April 20, 1908	
Robert Dall, Jr.	Draftsman "A"	July 18, 1910	
Horace A. Brown	Draftsman "A"	July 5, 1907	
Thomas D. Conn	Draftsman "B"	Nov. 21, 1910	Promoted from Draftsman "C" April 1, 1913.
C. Edgar Wood	Draftsman "B"	Oct. 3, 1911	Promoted from Draftsman "C" July 1, 1913.
Samuel Appleby	Draftsman "B"	Aug. 1, 1911	Promoted from Draftsman "C" July 1, 1913.
C. F. Black	Draftsman "B"	June 12, 1911	Promoted from Draftsman "C" May 1, 1913.
Albert C. Betz	Draftsman "B"	May 1, 1912	Promoted from Draftsman "C" July 1, 1913.
W. Graham Cole	Draftsman "B"	June 3, 1912	Promoted from Draftsman "C" July 1, 1913.
William L. Iardella	Draftsman "B"	Mar. 3, 1911	Promoted from Draftsman "C" April 15, 1913.
C. L. Ofenstein	Draftsman "B"	Nov. 1, 1912	Promoted from Draftsman "C" Aug. 1, 1913.
P. F. Davenport	Draftsman "C"	April 16, 1912	
C. J. Flayhart	Draftsman "C"	June 13, 1912	
E. M. Hamilton	Draftsman "C"	July 3, 1912	Dropped June 1, 1913.
Walter E. Lee	Draftsman "C"	Dec. 9, 1912	Resigned Feb. 15, 1913.
D. H. Lucchesi, Jr.	Draftsman "C"	May 7, 1912	
Samuel A. Mazer	Draftsman "C"	June 3, 1912	

TABLE No. 1—*Continued.*

PERSONNEL OF CHIEF ENGINEER'S STAFF.

NAME.	TITLE.	ENTERED SERVICE.	REMARKS.
J. L. Miller	Draftsman "C"	April 24, 1912	
W. K. Miller	Draftsman "C"	July 29, 1912	
George McLean	Draftsman "C"	May 1, 1912	Resigned Oct. 1, 1912; reappointed July 2, 1913; resigned Oct. 1, 1913.
Walter J. O'Neill	Draftsman "C"	Oct. 10, 1912	
Edwin A. Plitt	Draftsman "C"	Nov. 14, 1912	
Leslie B. Pope	Draftsman "C"	April 3, 1912	Resigned Aug. 15, 1913.
Richard J. Reese	Draftsman "C"	Sept. 25, 1912	
William C. Runge	Draftsman "C"	Oct. 21, 1912	
Herman A. Schneider	Draftsman "C"	April 12, 1912	
A. L. Shalowitz	Draftsman "C"	Oct. 1, 1912	
John K. Siems	Draftsman "C"	Nov. 11, 1912	
William H. Siems	Draftsman "C"	May 7, 1912	Resigned April 24, 1913.
E. Tschudy	Draftsman "C"	July 31, 1913	
Milton D. Swartz	Draftsman "C"	Oct. 24, 1913	
H. S. Steelman	Draftsman "C"	Sept. 4, 1913	
Otto F. Manger	Draftsman "C"	Feb. 24, 1913	
C. E. Keefer	Draftsman "C"	May 24, 1913	
J. Albert Schad	Draftsman "C"	June 12, 1913	Resigned Sept. 15, 1913.
Charles F. Gross	Draftsman "C"	June 16, 1913	Resigned July 30, 1913.
W. J. Kellinger	Draftsman "C"	June 23, 1913	Resigned July 4, 1913.
Ronald T. Anderson	Draftsman "C"	Nov. 3, 1913	
J. W. Faulconer	Draftsman "C"	April 24, 1913	
Edwin Fitzell	Draftsman "C"	Aug. 2, 1913	
J. Arthur Clark	Rodman "A"	June 10, 1912	Promoted from Draftsman "C" April 15, 1913.

TABLE No. 1—*Continued.*

PERSONNEL OF CHIEF ENGINEER'S STAFF.

Name.	Title.	Entered Service.	Remarks.
Harry P. Poole	Rodman "A"	May 16, 1912	Transferred from Draftsman "C" Oct. 1, 1913.
J. Franklin Diggs	Rodman "A"	Oct. 3, 1911	
William A. Twamley	Rodman "A"	Dec. 4, 1911	
Wilford H. Herbert	Rodman "A"	July 16, 1906	
Owen Laws	Rodman "A"	June 3, 1912	
C. F. Martin	Rodman "A"	May 13, 1912	
John T. Rooney	Rodman "A"	July 1, 1912	
A. H. Wernsdorfer	Rodman "A"	Mar. 18, 1912	
William B. O'Connor	Rodman "A"	Oct. 17, 1911	Promoted from Rodman "B" Feb. 1, 1913.
C. G. Walker	Rodman "A"	Dec. 1, 1911	Promoted from Rodman "B" Feb. 1, 1913.
A. T. Hilton	Rodman "A"	Oct. 3, 1911	Promoted from Rodman "B" July 1, 1913.
J. P. Joynes	Rodman "A"	June 12, 1911	Promoted from Rodman "B" Aug. 1, 1913.
C. D. Cann	Rodman "A"	June 14, 1912	Promoted from Rodman "B" Jan. 1, 1913; resigned Nov. 15, 1913.
Ray F. Gildea	Rodman "A"	Aug. 1, 1912	Promoted from Rodman "B" April 15, 1913.
F. L. Maier	Rodman "A"	June 24, 1912	Promoted from Rodman "B" July 1, 1913.
Joseph P. McCafferty	Rodman "A"	June 24, 1912	Promoted from Rodman "B" July 1, 1913.
Thomas G. Stowe	Rodman "A"	Feb. 19, 1912	Promoted from Rodman "B" Dec. 1, 1913.
Charles E. Woollen	Rodman "A"	April 25, 1913	
A. W. Fuchs	Rodman "A"	June 24, 1913	
J. P. Bonner	Rodman "A"	Aug. 15, 1913	Resigned Aug. 26, 1913.
R. E. L. Williams	Rodman "A"	April 2, 1913	
E. H. Compton	Rodman "A"	May 3, 1913	
H. R. McCauley	Rodman "A"	May 16, 1913	
A. J. Kutzleb	Rodman "A"	June 16, 1913	

TABLE No. 1—*Continued.*

PERSONNEL OF CHIEF ENGINEER'S STAFF.

NAME.	TITLE.	ENTERED SERVICE.	REMARKS.
H. Reid Treiber	Rodman "A"	Feb. 5, 1912	Promoted from Rodman "B" Aug. 1, 1913.
Charles T. Wanzer	Rodman "A"	June 27, 1913	
Alan F. Bristor	Rodman "B"	Oct. 10, 1912	
Chauncey Brooks	Rodman "B"	April 24, 1912	
M. E. Gerlach	Rodman "B"	May 28, 1912	
C. W. Hook	Rodman "B"	April 4, 1912	
James H. McKay	Rodman "B"	Mar. 14, 1912	Resigned July 1, 1913.
William T. Snyder	Rodman "B"	Mar. 28, 1912	Resigned Jan. 1, 1913.
Guy C. Sykes	Rodman "B"	May 22, 1912	
E. S. Trine	Rodman "B"	Nov. 14, 1912	
Otis G. Wilbur	Rodman "B"	Nov. 18, 1912	Resigned April 30, 1913.
Oscar R. Willey	Rodman "B"	May 27, 1912	Dropped June 15, 1913.
Howard Wilds	Rodman "B"	June 20, 1913	
M. E. Davis	Rodman "B"	July 7, 1913	Resigned Dec. 31, 1913.
C. W. Miller	Rodman "B"	July 10, 1913	
F. B. Beacham	Rodman "B"	July 7, 1913	
W. O. Towson	Rodman "B"	Sept. 17, 1913	
Leo Blankman	Rodman "B"	July 28, 1913	
Robert W. Downes	Rodman "B"	Sept. 11, 1913	
George E. Harris, Jr.	Rodman "B"	April 17, 1913	
Rollins Alexander	Rodman "B"	July 24, 1913	
C. E. Reynolds	Rodman "B"	Sept. 9, 1913	
George J. Armeling	Engineer of Tests	Aug. 8, 1907	Transferred from Chemist Jan. 1, 1913.
W. H. Streeter	Chemist and Bact.	Jan. 2, 1913	
T. R. Schoonmaker	Asst. Chemist	June 26, 1912	Transferred from Rodman "A" April 1, 1913

TABLE No. 1—*Concluded.*

PERSONNEL OF CHIEF ENGINEER'S STAFF.

NAME.	TITLE.	ENTERED SERVICE.	REMARKS.
M. H. Melvin	Cement Tester	June 27, 1912	Transferred from Rodman "A" Jan. 1, 1913.
Norman Byrd	Asst. Cement Tester	Feb. 1, 1913	
C. F. Kraeter	Cement Sampler	Sept. 20, 1906	Transferred from Rodman "A" Jan. 1, 1913.
Robert Piggott	Asst. Cement Sampler	Mar. 18, 1912	Transferred from Rodman "B" Jan. 1, 1913.
Charles H. Brooks	Asst. Cement Sampler	Nov. 16, 1907	Transferred from Rodman "B" Jan. 1, 1913.
R. N. Brooks	Asst. Cement Sampler	May 1, 1913	
Urban Preller	Laboratory Assistant	June 1, 1912	
H. N. O'Brien	Supt. Day Labor	Oct. 11, 1907	
Cloyd S. Weaver	Stenographer "A"	Jan. 2, 1912	Resigned April 1, 1913.
S. Robert Martin	Stenographer "A"	Feb. 19, 1912	Promoted from Stenog. "B" July 15, 1913.
Robert F. Windfohr	Stenographer "A"	Oct. 28, 1912	Promoted from Stenog. "B" July 15, 1913.
J. L. Pennington	Stenographer "B"	July 23, 1909	Resigned Oct. 1, 1913.
George F. Bayliss	Stenographer "B"	Feb. 5, 1912	Resigned Mar. 23, 1913.
Edison M. Hughes	Stenographer "B"	Feb. 1, 1912	
George W. Schiminger	Stenographer "B"	Oct. 1, 1913	
G. L. Hughes	Stenographer "B"	Sept. 5, 1913	
J. E. Freeman	Stenographer "B"	Sept. 8, 1913	
J. E. Derenberger	Stenographer "B"	April 7, 1913	
C. Milton Stapf	Stenographer "B"	Aug. 11, 1913	Resigned Sept. 1, 1913.
M. H. Frank	File Clerk	Jan. 25, 1912	
William C. Higgins	Clerk	Oct. 3, 1912	
M. J. Kerr	Clerk	Feb. 3, 1913	
Kenneth M. Burns	Clerk	May 16, 1913	

TABLE No. 2.

STATEMENT OF CONTRACTS LET PRIOR TO 1913.

Contract.	Date of Contract.	Name of Contractor.	Proportion of Work Completed December 31, 1913.
Wash Borings No. 1	July 2, 1906.	B. F. Smith & Bro.	Completed July 28, 1906.
Testing Plant	Oct. 17, 1906.	Malcolm W. Hill Co.	Completed July 1, 1907.
Laboratory	Oct. 18, 1906.	Wm. Kirkpatrick	Completed Feb. 1, 1907.
Storm Water No. 1	Cct. 18, 1906.	M. A. Talbott Co.	Completed April 14, 1908.
Sanitary Sewers—Walbrook	Oct. 29, 1906.	M. A. Talbott Co.	Completed June 27, 1907.
Outfall Sewer, Section No. 1	Dec. 7, 1906.	M. A. Talbott Co.	Completed August 1, 1909.
Outfall Sewer, Section No. 2	Dec. 7, 1906.	M. A. Talbott Co.	Completed August 6, 1908.
Sewage Pumping Plant Mach'y.	Dec. 12, 1906.	Bethlehem Steel Co.	Completed Feb. 18, 1913.
West Low Level Interceptor, Section No. 1	May 1, 1907.	Metropolitan Contr. Co.	Completed March 26, 1908.
West Low Level Interceptor, Section No. 2	May 1, 1907.	Metropolitan Contr. Co.	Completed March 26, 1908.
Outfall Sewer, Section No. 3	May 4, 1907.	J. Connelly Const. Co.	Completed June 7, 1909.
Outfall Sewer, Section No. 7	May 4, 1907.	J. Connelly Const. Co.	Completed Dec. 19, 1908.
Outfall Sewer, Section No. 8	May 4, 1907.	J. Connelly Const. Co.	Completed Nov. 1, 1908.
Outfall Sewer, Section No. 9	May 4, 1907.	A. F. Helm	Completed Oct. 13, 1908.
Outfall Sewer, Section No. 6	May 28, 1907.	David Peoples	Completed Oct. 16, 1908.
Storm-Water No. 2	May 28, 1907.	David Peoples	Completed May 11, 1909.
Storm-Water No. 3	May 28, 1907.	David Peoples	Completed May 15, 1909.
High Level Interceptor, Section No. 1	May 29, 1907.	M. A. Talbott Co.	Completed Nov. 5, 1908.
High Level Interceptor, Section No. 2	May 29, 1907.	M. A. Talbott Co.	Completed May 1, 1909.

TABLE No. 2—*Continued.*

STATEMENT OF CONTRACTS LET PRIOR TO 1913.

CONTRACT.	DATE OF CONTRACT.	NAME OF CONTRACTOR.	PROPORTION OF WORK COMPLETED DECEMBER 31, 1913.
Outfall Sewer, Section No. 4..	May 29, 1907.	M. A. Talbott Co......	Completed March 17, 1909.
Outfall Sewer, Section No. 5..	May 29, 1907.	M. A. Talbott Co......	Completed August 1, 1909.
Outfall Sewer, Section No. 10.	June 10, 1907.	J. Connelly Const. Co....	Completed Nov. 1, 1908.
	NOTE.—This contract was first awarded to J. Erwin Hillpot, but he was unable to furnish satisfactory bond and the contract was reawarded to the J. Connelly Construction Company, the next lowest bidder.		
Sewage Disposal Plant, Clearing and Grubbing Disposal Area	July 8, 1907.	Lane Bros. Co. & Jones..	Completed Sept. 1, 1909.
	NOTE.—This contract was awarded on April 24 to J. Erwin Hillpot, but he was unable to furnish a satisfactory bond and the work was readvertised.		
Digging Test Well on site of Sewage Pumping Station....	July 29, 1907.	**Metropolitan Contr. Co.**	Completed August 27, 1907.

TABLE No. 2—*Continued.*

STATEMENT OF CONTRACTS LET PRIOR TO 1913.

CONTRACT.	DATE OF CONTRACT.	NAME OF CONTRACTOR.	PROPORTION OF WORK COMPLETED DECEMBER 31, 1913.
West Low Level Interceptor, Section No. 3	Feb. 28, 1908.	Metropolitan Contr. Co.	Completed Oct. 30, 1908.
East Low Level Interceptor, Section No. 1	May 8, 1908.	T. J. O'Connell	Completed May 15, 1909.
East Low Level Interceptor, Section No. 2	May 8, 1908.	T. J. O'Connell	Completed May 15, 1909.
Grading Manderson lot	May 8, 1908.	Gustavus Keckel	Completed June 29, 1908.
Sewage Pumping Station, Superstructure	May 9, 1908.	Noel Construction Co.	
Sewage Pumping Station, Substructure	May 9, 1908.	Noel Construction Co.	Completed August 1, 1911.
Storm Water Contract No. 4	June 17, 1908.	Reilly & Riddle	Completed March 16, 1909.
Roadway, Willis avenue	Aug. 7, 1908.	L. B. McCabe	Completed Nov. 30, 1908.
Storm Water Contract No. 5	Sept. 17, 1908.	David Peoples	Completed Jan. 23, 1909.
Roadways on Baltimore Brick Company's property	Sept. 28, 1908.	Thos. Mullan	Completed Dec. 7, 1908.
West Low Level Interceptor, Section No. 4	Oct. 28, 1908.	Metropolitan Contr. Co.	Completed July 10, 1909.
Force Main	Nov. 2, 1908.	Warren F. Brenizer Co.	Completed Oct. 12, 1909.
Force Main Sewer	Nov. 4, 1908.	Ryan & Reilly	Completed Sept. 30, 1909.
Sewage Disposal Plant	Nov. 4, 1908.	New York Continental Jewell Filtration Co.	Completed Dec. 23, 1910.
Storm Water Contract No. 6	Dec. 31, 1908.	Booth & Flinn	Completed Jan. 28, 1910.

TABLE No. 2—*Continued.*

STATEMENT OF CONTRACTS LET PRIOR TO 1913.

Contract.	Date of Contract.	Name of Contractor.	Proportion of Work Completed December 31, 1913.
Filter Stone for Sewage Disposal Plant..................	Dec. 31, 1908.	Fisher & Carozza.......	Completed June 1, 1911.
Sanitary Contract No. 35, Lateral Sewers, District No. 26.	Mar. 6, 1909.	T. Wallace Reilly.......	Completed Oct. 7, 1909.
Sanitary Contract No. 37, Sewage Disposal Plant, Water Tanks and Tower...........	Feb. 19, 1909.	Horace E. Horton (Chicago Bridge and Iron Works)..............	Completed Sept. 1, 1909.
Sanitary Contract No. 38, Lateral Sewers, District No. 28.	April 10, 1909.	Ryan & Reilly..........	Completed Nov. 10, 1909.
Sanitary Contract No. 39, Lateral Sewers, District No. 30.	April 15, 1909.	James Ferry & Sons....	Completed Sept. 25, 1909.
Sanitary Contract No. 40, Forest Park Sewage Disposal Works................	Sept. 15, 1909.	Lane Bros. Co. & Jones.	Completed Oct. 25, 1910.
Sanitary Contract No. 41, Trunk Sewers, District No. 48	Sept. 10, 1909.	T. Wallace Reilly......	Contract abandoned June 15, 1910. 72% of work completed.
Sanitary Contract No. 42, Jones Falls Interceptor, Section No. 1	Sept. 22, 1909.	M. A. Talbott Co......	Completed Oct. 15, 1910.
Sanitary Contract No. 43, Lateral Sewers, District No. 29.	Sept. 11, 1909.	Wm. McCarthy & Co...	Completed April 25, 1910.

TABLE No. 2—*Continued.*

STATEMENT OF CONTRACTS LET PRIOR TO 1913.

CONTRACT.	DATE OF CONTRACT.	NAME OF CONTRACTOR.	PROPORTION OF WORK COMPLETED DECEMBER 31, 1913.
Sanitary Contract No. 44, Lateral Sewers, District No. 21.	Dec. 18, 1909.	David Peoples	Completed Aug. 15, 1910.
Sanitary Contract No. 45, Lateral Sewers, District No. 27.	Dec. 18, 1909.	David Peoples	Completed Aug. 8, 1910.
Storm Water Contract No. 7	June 2, 1909.	Wm. McCarthy & Co.	Completed Dec. 31, 1909.
Storm Water Contract No. 8	Sept. 11, 1909.	M. O'Herron & Co.	Completed Dec. 31, 1909.
Sanitary Contract No. 46, Power-house, Pump House and Land Conduits, Sewage Disposal Plant	Feb. 21, 1910.	Ryan & Reilly	Completed April 1, 1911.
Sanitary Contract No. 47, Underwater Discharge Conduits, Sewage Disposal Plant.	Mar. 10, 1910.	B. F. Sweeten & Son	Completed Dec. 2, 1911.
Sanitary Contract No. 48, Lateral Sewers, District 19-B	Feb. 28, 1910.	Irwin Brothers	Completed Oct. 15, 1910.
Sanitary Contract No. 49, Lateral Sewers, District No. 35	Feb. 28, 1910.	Irwin Brothers	Completed Aug. 12, 1910.
Sanitary Contract No. 50, Jones' Falls Interceptor, Sec. No. 2.	May 20, 1910.	United Engineering & Construction Co.	Completed May 18, 1911.
Sanitary Contract No. 51, Electrical and Mechanical Equipment, Sewage Disposal Plant.	May 21, 1910.	McCay Engineering Co.	Completed Feb. 20, 1912.

TABLE No. 2- -*Continued.*

STATEMENT OF CONTRACTS LET PRIOR TO 1913.

CONTRACT.	DATE OF CONTRACT.	NAME OF CONTRACTOR.	PROPORTION OF WORK COMPLETED DECEMBER 31, 1913.
Sanitary Contract No. 52, Lateral Sewers, District No. 19-A, etc.	June 9, 1910.	Wm. McCarthy & Co.	Completed June 16, 1911.
Sanitary Contract No. 53, Lateral Sewers, District No. 25, etc.	June 23, 1910.	D. V. Ault & Co.	Completed Jan. 16, 1911.
Sanitary Contract No. 54, Trunk Sewers, District No. 48*	July 28, 1910.	W. H. & C. F. Thompson	Completed Mar. 10, 1911.
Sanitary Contract No. 55, Lateral Sewers, District No. 14	Sept. 16, 1910.	B. F. Sweeten & Son	Completed April 12, 1911.
Sanitary Contract No. 56, Coal and Ash Conveying Plant, Sewage Pumping Station	Sept. 20, 1910.	Dietz Engineering Co.	Completed March 1, 1913.
Sanitary Contract No. 57, Lateral Sewers, District No. 34-A	Nov. 10, 1910.	Whiting-Middleton Construction Co.	Completed July 14, 1911.
Sanitary Contract No. 58, McMechen Street Interceptor	Nov. 23, 1910.	McCay Engineering Co.	Completed April 3, 1911.
Sanitary Contract No. 59, Electric Wiring, Sewage Pumping Station	Dec. 16, 1910.	Central Electric Co.	Completed June 26, 1912.
Storm Water Contract No. 9	Mar. 26, 1910.	David Peoples	Completed June 27, 1911.
Storm Water Contract No. 10.	June 29, 1910.	George F. Beavin	Completed Dec. 24, 1910.

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*Completion of work originally included in Contract No. 41.

TABLE No. 2—*Continued.*

STATEMENT OF CONTRACTS LET PRIOR TO 1913.

CONTRACT.	DATE OF CONTRACT.	NAME OF CONTRACTOR.	PROPORTION OF WORK COMPLETED DECEMBER 31, 1913.
Sanitary Contract No. 60, Sewage Disposal Plant Laboratory Building	June 3, 1911.	D. M. Andrew Co.	Completed April 1, 1912.
Sanitary Contract No. 61, Lateral Sewers, District No. 40-C	Jan. 10, 1911.	B. F. Sweeten & Son	Completed Nov. 1, 1911.
Sanitary Contract No. 62, Pratt Street Trunk Sewer	Mar. 9, 1911.	McCay Engineering Co.	Completed Dec. 18, 1911.
Sanitary Contract No. 63, Lateral Sewers, District No. 15	Mar. 11, 1911.	Wm. McCarthy & Co.	Completed Nov. 2, 1911.
Sanitary Contract No. 64, Sewage Pumping Station, Waterpiping and Steam Heating	Mar. 6, 1911.	Wanner Steam and Hot Water Heating Co.	Completed Mar. 31, 1912.
Sanitary Contract No. 65, Sewage Disposal Plant, Sewage Screens			Bids rejected.
Sanitary Contract No. 66, Lateral Sewers, District No. 36-A	June 15, 1911.	B. F. Sweeten & Son	Completed Mar. 1, 1912.
Sanitary Contract No. 67, Sewage Pumping Station, Junction Sewer	June 8, 1911.	Martin J. Beach	Completed Dec. 30, 1911.
Sanitary Contract No 68, Sewage Disposal Plant, Nozzles for Sprinkling Filters	Aug. 21, 1911.	Merritt & Co.	Completed Jan. 10, 1912.

TABLE No. 2—*Continued.*

STATEMENT OF CONTRACTS LET PRIOR TO 1913.

Contract.	Date of Contract.	Name of Contractor.	Proportion of Work Completed December 31, 1913.
Sanitary Contract No. 69, Fixed Screens at Sewage Disposal Works and Sewage Pumping Station	July 27, 1911.	H. S. Roberts	Completed Feb. 20, 1912.
Sanitary Contract No. 70, Sewage Disposal Plant, Pier over Discharge Pipes			Withdrawn.
Sanitary Contract No. 71, Lateral Sewer in Alley West of Park Heights Avenue, north of Fifth Avenue	Aug. 9, 1911.	G. R. Abbott	Completed Sept. 30, 1911.
Sanitary Contract No. 72, Sewage Pumping Plant, Discharge Piping and Valves	Aug. 17, 1911.	B. F. Sweeten & Son	Completed Nov. 1, 1912.
Sanitary Contract No. 73, Sewage Pumping Station, Electric Generators and Switchboards	Sept. 18, 1911.	Thos. C. Basshor Co.	90 per cent.
Sanitary Contract No. 74, Lateral Sewers, District No. 20-B	Sept. 22, 1911.	B. F. Sweeten & Son	Completed Jan. 4, 1913.
Sanitary Contract No. 75, High Level Interceptor, Section No. 4	Sept. 25, 1911.	W. H. & C. F. Thompson	Completed Nov. 18, 1912.

TABLE No. 2—*Continued.*

STATEMENT OF CONTRACTS LET PRIOR TO 1913.

CONTRACT.	DATE OF CONTRACT.	NAME OF CONTRACTOR.	PROPORTION OF WORK COMPLETED DECEMBER 31, 1913.
Sanitary Contract No. 76, Lateral Sewer in Alley east of Park Heights Avenue, between Third and Fifth Avenues	Sept. 25, 1911.	W. H. & C. F. Thompson	Completed Nov. 3, 1911.
Sanitary Contract No. 77, Sewage Disposal Plant, Revolving Screens	Nov. 10, 1911.	D'Olier Engineering Co.	Completed April 30, 1912.
Storm Water Contract No. 11.	Jan. 13, 1911.	Wm. McCarthy & Co.	Completed May 4, 1911.
Storm Water Contract No. 12.	Mar. 30, 1911.	C. B. Clark & Co.	Completed April 10, 1912.
Storm Water Contract No. 13.	Sept. 22, 1911.	Ryan & Reilly	Completed Sept. 2, 1912.
Storm Water Contract No. 14, Jones Falls Conduits, Section No. 1	July 10, 1911.	M. M. Elkan	Completed July 1, 1913.
Storm Water Contract No. 15.	Sept. 9, 1911.	Martin J. Beach	Completed Nov. 2, 1911.
Storm Water Contract No. 16, Jones Falls Conduits, Section No. 2	Nov. 6, 1911.	Fisher & Carozza	Completed December 6, 1913.
Sanitary Contract No. 78, Lateral Sewers, District No. 20-A	Jan. 3, 1912.	Wm. McCarthy & Co.	Completed Nov. 19, 1912.
Sanitary Contract No. 79. Sanitary Sewers in Frederick Road	Feb. 16, 1912.	Martin J. Beach	Completed Aug. 11, 1912.

TABLE No. 2—*Continued.*

STATEMENT OF CONTRACTS LET PRIOR TO 1913.

Contract.	Date of Contract.	Name of Contractor.	Portion of Work Completed December 31, 1913.
Sanitary Contract No. 80, Lateral Sewers at Bay View Asylum	Feb. 2, 1912.	Bond & Bates	Completed Sept. 10, 1912.
Sanitary Contract No. 81, High Level Interceptor, Section No. 5	Feb. 23, 1912.	Ryan & Reilly	Completed Feb. 1, 1913.
Sanitary Contract No. 82, House Connections Across Footways in Districts Nos. 25, 27, 28, 34-A and 35	Jan. 3, 1912.	Wm. McCarthy & Co.	Completed July 31, 1912.
Sanitary Contract No. 83, Nozzles for Sprinkling Beds Nos. 3 and 4	Feb. 3, 1912.	Pacific Flush Tank Co.	Completed April 20, 1912.
Sanitary Contract No. 84, Lateral Sewers in Light and Gay Streets	Feb. 23, 1912.	Ryan & Reilly	Completed April 30, 1912.
Sanitary Contract No. 85, House Connections, District No. 14	Feb. 20, 1912.	Gallagher, Boyle & Muller	Completed July 3, 1912.
Sanitary Contract No. 86, Lateral Sewers in District No. 17	Apr. 15, 1912.	B. F. Sweeten & Son	Completed Feb. 8, 1913.

TABLE No. 2—*Continued.*

STATEMENT OF CONTRACTS LET PRIOR TO 1913.

CONTRACT.	DATE OF CONTRACT.	NAME OF CONTRACTOR.	PORTION OF WORK COMPLETED DECEMBER 31, 1913.
Sanitary Contract No. 87, Lateral Sewers in District No. 18	May 1, 1912.	B. F. Sweeten & Son	Completed July 12, 1913.
Sanitary Contract No. 88, Lateral Sewers in District No. 40-B	May 2, 1912.	Jas. Ferry & Sons	Completed Feb. 1, 1913.
Sanitary Contract No. 89, High Level Interceptor, Section No. 3	May 31, 1912.	H. C. Brooks & Co.	Completed April 18, 1913.
Sanitary Contract No. 90, Miscellaneous Lateral Sewers	June 7, 1912.	Ryan & Reilly	Completed Dec. 2, 1912.
Sanitary Contract No. 91, Macadam Roadway at Back River	July 12, 1912.	Carozza & Lavezza	Completed Oct. 22, 1912.
Sanitary Contract No. 92, House Connections Across Footways in District No. 15.	June 21, 1912.	Gallagher, Boyle & Muller	Completed Oct. 15, 1912.
Sanitary Contract No. 93, House Connections Across Footways in Districts Nos. 29 and 30	July 16, 1912.	Wm. McCarthy & Co.	Completed Jan. 2, 1913.
Sanitary Contract No. 94, Miscellaneous Lateral Sewers No. 2	Aug. 17, 1912.	Gallagher, Boyle & Bryan	Completed Feb. 15, 1913.

TABLE No. 2—*Continued.*

STATEMENT OF CONTRACTS LET PRIOR TO 1913.

CONTRACT.	DATE OF CONTRACT.	NAME OF CONTRACTOR.	PORTION OF WORK COMPLETED DECEMBER 31, 1913.
Sanitary Contract No. 95, High Level Interceptor, Section No. 6	Aug. 6, 1912.	Ryan & Reilly	Completed May 1, 1913.
Sanitary Contract No. 96, Digging Ditches at Back River			Bids rejected.
Sanitary Contract No. 97, Miscellaneous Lateral Sewers No. 3	Sept. 7, 1912.	Gallagher, Boyle & Bryan	Completed Feb. 22, 1913.
Sanitary Contract No. 98, House Connections Across Footways in District No. 26	Sept. 27, 1912.	Jas. Ferry & Sons	Completed Feb. 1, 1913.
Sanitary Contract No. 99, House Connections Across Footways in District No. 19-B	Sept. 27, 1912.	Wm. McCarthy & Co.	Completed Jan. 15, 1913.
Sanitary Contract No. 100, Sprinkling Filters, Disposal Plant	Oct. 10, 1912.	Lane Bros. Co.	94 per cent.
Sanitary Contract No. 101, Broken Stone, Sewage Disposal Plant	Oct. 3, 1912.	Standard Lime & Stone Co.	26 per cent.
Sanitary Contract No. 102, High Level Interceptor, Section No. 7	Oct. 16, 1912.	C. B. Clark & Co.	Completed Sept. 29, 1913.

TABLE No. 2—*Concluded.*

STATEMENT OF CONTRACTS LET PRIOR TO 1913.

CONTRACT.	DATE OF CONTRACT.	NAME OF CONTRACTOR.	PORTION OF WORK COMPLETED DECEMBER 31, 1913.
Sanitary Contract No. 103, Locust Point Trunk Sewer, Section No. 1	Oct. 16, 1912.	Ryan & Reilly	Completed May 5, 1913.
Sanitary Contract No. 104, Lateral Sewers, District No. 40-A	Nov. 6, 1912.	Wm. McCarthy & Co.	Completed June 2, 1913.
Sanitary Contract No. 105, House Connections Across Footways in Districts Nos. 36-A and 40-C	Nov. 30, 1912.	Carozza & Lavezza	Completed Mar. 10, 1913.
Sanitary Contract No. 106, House Connections in Districts No. 19-A and 21-A	Dec. 30, 1912.	Wm. McCarthy & Co.	Completed May 16, 1913.
Storm-water Contract No. 17.	Jan. 2, 1912.	N. A. Middleton & Co.	Completed July 6, 1912.
Storm-water Contract No. 18.	Jan. 3, 1912.	Wm. McCarthy & Co.	Completed Sept. 29, 1912.
Storm-water Contract No. 19.	Mar. 18, 1912.	B. F. Sweeten & Son	Completed Jan. 6, 1913.
Storm-water Contract No. 20.	Apr. 25, 1912.	Ryan & Reilly	Completed Nov. 1, 1912.
Storm-water Contract No. 21.	July 13, 1912.	C. B. Clark & Co.	Completed April 2, 1913.
Storm-water Contract No. 22.	Oct. 8, 1912.	B. F. Sweeten & Son	Completed Dec. 15, 1913.
Storm-water Contract No. 23.	Oct. 25, 1912.	Wm. McCarthy & Co.	Completed April 24, 1913.
Storm-water Contract No. 24.	Dec. 27, 1912.	B. F. Sweeten & Son	Completed Dec. 15, 1913.
Storm-water Contract No. 25.	Dec. 31, 1912.	Jas. Ferry & Sons	Completed Dec. 17, 1913.

TABLE No. 3.

STATEMENT OF CONTRACTS LET DURING THE YEAR 1913, WITH PROPORTION OF WORK COMPLETED DECEMBER 31.

Contract.	Name of Contractor.	Date of Contract.	Principal Items of Work.	Lowest Bid.	Next to Lowest Bid.	Proportion of Work Completed Dec. 31, 1913.
Sanitary Contract No. 107, Lateral Sewers, District No. 8.	Frank Bruno & Co.	Feb. 18, 1913	31,450 lin. ft. 8″ sewer. 2,805 lin. ft. 10″ sewer. 2,230 lin. ft. 12″ sewer. 690 lin. ft. 15″ sewer. 315 lin. ft. 18″ sewer. 660 lin. ft. 22″ sewer. 810 lin. ft. 24″ sewer. 350 lin. ft. 36″ sewer. 135 cu. yds. excavation below sub-grade. 70 cu. yds. gravel refill below sub-grade. 195 cu. yds. concrete masonry. 4,000 lin. ft. 4″ and 6″ underdrain. 366 M. ft. B. M. sheeting, shoring, etc. 2,128 lin. ft. standard manholes. 242 manhole frames. 950 manhole steps. 48 drop-connections. 33,800 lin. ft. excavation for house-connections. 35,100 lin. ft. vitrified and cast-iron pipe house-connections. 2,613 branches. 350 lin. ft. vitrified standpipe. 24 lamphole frames and covers. 1,650 lin. ft. W. I. water supply pipe to manholes. 5,050 sq. ft. granolithic pavement relaid. 16,750 sq. ft. vitrified block and other pavement relaid.	$117,873.52	$124,886.70	Completed Dec. 31, 1913.

TABLE No. 3—*Continued.*

STATEMENT OF CONTRACTS LET DURING THE YEAR 1913, WITH PROPORTION OF WORK COMPLETED DECEMBER 31.

Contract.	Name of Contractor.	Date of Contract.	Principal Items of Work.	Lowest Bid.	Next to Lowest Bid.	Proportion of Work Completed Dec. 31, 1913.
Sanitary Contract No. 108, Miscellaneous Lateral Sewers No. 4.	W. H. Thompson Construction Company.	May 16, 1913	4,425 lin. ft. 8″ sewer. 2,485 lin. ft. 10″ sewer. 40 cu. yds. excavation below sub-grade. 530 cu. yds. rock excavation. 25 cu. yds. concrete masonry. 700 lin. ft. 4″ and 6″ underdrain. 72 M. ft. B. M. sheeting, shoring, etc. 320 lin. ft. manholes. 37 manhole frames and covers. 260 manhole steps. 1,850 lin. ft. excavation for house-connections. 2,100 lin. ft. vitrified and cast-iron pipe house-connections. 250 lin. ft. W. I. water supply pipe to manholes. 225 sq. ft. granolithic pavement relaid. 535 lin. ft. vitrified block and other pavement relaid.	$17,006.20	$19,080.45	Completed Nov. 14, 1913.

TABLE No. 3—*Continued.*

STATEMENT OF CONTRACTS LET DURING THE YEAR 1913, WITH PROPORTION OF WORK COMPLETED DECEMBER 31.

Contract.	Name of Contractor.	Date of Contract.	Principal Items of Work.	Lowest Bid.	Next to Lowest Bid.	Proportion of Work Completed Dec. 31, 1913.
Sanitary Contract No. 109, Lateral Sewers, District No. 41.	Carozza, Lavezza & Carozza.	Mar. 11, 1913	26,100 lin. ft. 8″ sewer.	$92,697.65	$94,242.00	Completed Dec. 1, 1913.
			390 lin. ft. 10″ sewer.			
			1,190 lin. ft. 12″ sewer.			
			490 lin. ft. 15″ sewer.			
			210 lin. ft. 22″ sewer.			
			880 lin. ft. 24″ sewer.			
			100 cu. yds. excavation below sub-grade.			
			75 yds. rock excavation.			
			230 cu. yds. concrete masonry.			
			3,500 lin. ft. 4″ and 6″ underdrain.			
			366 M. ft. B. M. sheeting, shoring, etc.			
			1,600 lin. ft. manholes.			
			168 manhole frames and covers.			
			672 manhole steps.			
			21,600 lin. ft. excavation for house-connections.			
			25,705 lin ft. vitrified and cast-iron pipe house-connections.			
			1,329 branches.			
			400 lin. ft. vitrified standpipes.			
			1,000 lin. ft. W. I. water supply pipe to manholes.			
			2,975 sq. ft. granolithic pavement relaid.			
			9,850 lin. ft. vitrified block and other pavement relaid.			

TABLE No. 3—*Continued.*

STATEMENT OF CONTRACTS LET DURING THE YEAR 1913, WITH PROPORTION OF WORK COMPLETED DECEMBER 31.

CONTRACT.	NAME OF CONTRACTOR.	DATE OF CONTRACT.	PRINCIPAL ITEMS OF WORK.	LOWEST BID.	NEXT TO LOWEST BID.	PROPORTION OF WORK COMPLETED DEC. 31, 1913.
Sanitary Contract No. 110, Lateral Sewers, District No. 16-B.	McCarthy & O'Herron.	May 1, 1913	5,175 lin. ft. 8″ sewer in trench. 3,800 lin. ft. 10″ sewer in tunnel. 140 lin. ft. 12″ sewer in tunnel. 390 lin. ft. 15″ sewer in tunnel. 225 lin. ft. 18″ sewer in tunnel. 50 cu. yds. rock excavation. 310 cu. yds. concrete masonry. 7,300 lin. ft. 4″ and 6″ underdrain. 1,080 M. ft. B. M. sheeting, shoring, etc. 1,480 lin. ft. manhole masonry. 118 manhole frames and covers. 750 manhole steps. 14,000 lin ft. excavation for house-connections. 15,110 lin. ft. vitrified and cast-iron pipe house-connections. 685 branches. 625 lin. ft. W. I. water supply pipe to manholes. 2,450 sq. ft. granolithic pavement relaid. 4,050 lin. ft. vitrified block and other pavement relaid.	$146,833.70	$147,470.90	99 per cent.

TABLE No. 3—*Continued.*

STATEMENT OF CONTRACTS LET DURING THE YEAR 1913, WITH PROPORTION OF WORK COMPLETED DECEMBER 31.

CONTRACT.	NAME OF CONTRACTOR.	DATE OF CONTRACT.	PRINCIPAL ITEMS OF WORK.	LOWEST BID.	NEXT TO LOWEST BID.	PROPORTION OF WORK COMPLETED DEC. 31, 1913.
Sanitary Contract No. 111, Lateral Sewers District No. 16-A.	Middleton-Thompson Company.	June 3, 1913	2,585 lin. ft. 10″ sewer in tunnel. 11,000 lin. ft. 10″ sewer in trench. 1,155 lin. ft. 12″ sewer in tunnel. 635 lin. ft. 12″ sewer in trench. 1,000 lin. ft. 15″ sewer in trench. 755 lin. ft. 18″ sewer in tunnel. 160 lin. ft. 18″ sewer in trench. 305 lin. ft. 20″ sewer in trench. 420 lin. ft. 22″ sewer in tunnel. 340 lin. ft. 22″ sewer in trench. 50 cu. yds. rock excavation. 310 cu. yds. concrete masonry. 7,300 lin. ft. underdrain, 4″ to 6″. 915 M. ft. B. M. sheeting, shoring, etc. 1,400 lin. ft. manholes. 116 manhole frames and covers. 750 manhole steps. 13,900 lin. ft. excavation for house-connections. 14,530 lin. ft. vitrified and cast-iron pipe house-connections. 660 branches. 600 lin. ft. vitrified standpipe. 2,200 sq. ft. granolithic pavement relaid. 4,700 lin. ft. vitrified and other pavement relaid.	$157,503.40	$164,826.25	77 per cent.
Sanitary Contract No. 113, Paving, Around Sewage Pumping Station	John Danini.	Aug. 8, 1913	642 lin. ft. concrete coping. 602 lin. ft. armored concrete curb. 35 cu. yds. concrete in retaining walls. 6,865 sq. ft. granolithic pavement.	$1,998.11	$2,090.31	Completed Oct. 7, 1913.

TABLE No. 3—*Continued.*

STATEMENT OF CONTRACTS LET DURING THE YEAR 1913, WITH PROPORTION OF WORK COMPLETED DECEMBER 31.

CONTRACT.	NAME OF CONTRACTOR.	DATE OF CONTRACT.	PRINCIPAL ITEMS OF WORK.	LOWEST BID.	NEXT TO LOWEST BID.	PROPORTION OF WORK COMPLETED DEC. 31, 1913.
Sanitary Contract No. 114, High Level Interceptor, Section No. 8.	C. B. Clark & Co.	June 4. 1913	5,300 cu. yds. excavation in trench. 1,425 lin. ft. excavation in tunnel. 375 cu. yds. rock excavation in trench. 2,000 cu. yds. rock excavation in tunnel. 260 cu. yds. brick masonry. 1,335 cu. yds. concrete masonry. 2,000 lbs. twisted steel for reinforcement. 500 cu. yds. embankment. 335 M. ft. B. M. sheeting, shoring, etc. 400 lin. ft. excavation for house-connections. 510 lin. ft. vitrified and cast-iron pipe house-connections. 50 sq. ft. granolithic pavement relaid. 400 lin. ft. vitrified and other pavement relaid. 3,000 lin. ft. 6″ and 8″ underdrain.	$100,162.40	$107,963.05	85 per cent.
Sanitary Contract No. 115, House Connections Across Foot-[illegible] District [illegible] 2[illegible] B.	Carozza, Lavezza & Carozza.	June 2, 1913	29,610 lin. ft. excavation for house-connections. 30,785 lin. ft. vitrified and cast-iron pipe house-connections. 420 branches. 9 M. ft. B. M. sheeting, shoring, etc. [illegible]300 sq. ft. granolithic pavement relaid. 27,560 lin. ft. vitrified and other pavement relaid.	$23,870.30	$24,712.70	Completed Oct. 22, 1913.

TABLE No. 3—*Continued.*

STATEMENT OF CONTRACTS LET DURING THE YEAR 1913, WITH PROPORTION OF WORK COMPLETED DECEMBER 31.

CONTRACT.	NAME OF CONTRACTOR.	DATE OF CONTRACT.	PRINCIPAL ITEMS OF WORK.	LOWEST BID.	NEXT TO LOWEST BID.	PROPORTION OF WORK COMPLETED DEC. 31, 1913.
Sanitary Contract No. 116, Lateral Sewers, District No. 22-B.	Gallagher, Boyle & Bryan.	June 19, 1913	44,250 lin. ft. 8″ sewer. 2,550 lin. ft. 10″ sewer. 2,600 lin. ft. 12″ sewer. 1,100 lin. ft. 15″ sewer. 75 cu. yds. rock excavation. 580 cu. yds. concrete masonry. 10,000 lin. ft. 4″ and 6″ underdrain. 930 M. ft. B. M. sheeting, shoring, etc. 2,650 lin. ft. manholes. 280 manhole frames and covers. 1,400 manhole steps. 53,325 lin. ft. excavation for house-connections. 53,865 lin. ft. vitrified and cast-iron pipe house-connections. 3,510 branches. 2,000 lin. ft. W. I. water supply pipe to manholes. 8,000 sq. ft. granolithic pavement relaid. 20,000 lin. ft. vitrified and other pavement relaid.	$190,001.80	$197,985.05	Completed Dec. 10, 1913.

TABLE No. 3—*Continued*.

STATEMENT OF CONTRACTS LET DURING THE YEAR 1913, WITH PROPORTION OF WORK COMPLETED DECEMBER 31.

Contract.	Name of Contractor.	Date of Contract.	Principal Items of Work.	Lowest Bid.	Next to Lowest Bid.	Proportion of Work Completed Dec. 31, 1913.
Sanitary Contract No. 117, Miscellaneous Lateral Sewers.	W. H. Thompson Construction Company.	July 18, 1913	12,000 lin ft. 8″ sewer.	$51,183.75	$51,605.25	99 per cent.
			2,110 lin. ft. 10″ sewer.			
			20 cu. yds. rock excavation.			
			60 cu. yds. concrete masonry.			
			3,500 lin. ft. 4″ to 6″ underdrain.			
			233 M. ft. B. M. sheeting, shoring, etc.			
			1,100 lin. ft. manholes.			
			110 manhole covers.			
			550 manhole steps.			
			9,700 lin. ft. excavation for house-connections.			
			11,475 lin. ft. vitrified and cast-iron pipe house-connections.			
			740 branches.			
			500 lin. ft. W. I. water supply pipe to manholes.			
			4,500 sq. ft. granolithic pavement relaid.			
			10,000 lin ft. vitrified and other pavement relaid.			

TABLE No. 3—*Continued.*

STATEMENT OF CONTRACTS LET DURING THE YEAR 1913, WITH PROPORTION OF WORK COMPLETED DECEMBER 31.

CONTRACT.	NAME OF CONTRACTOR.	DATE OF CONTRACT.	PRINCIPAL ITEMS OF WORK.	LOWEST BID.	NEXT TO LOWEST BID.	PROPORTION OF WORK COMPLETED DEC. 31, 1913.
Sanitary Contract No. 118, Lateral Sewers, Districts Nos. 21-A and 22-A.	McCarthy & O'Herron.	Sept. 16, 1913	6,600 lin. ft. 8″ sewer. 3,500 lin. ft. 10″ sewer. 1,400 lin. ft. 12″ sewer. 1,150 lin. ft. 16″ sewer. 25 cu. yds. rock excavation. 180 cu. yds. concrete masonry. 6,000 lin. ft. 4″ to 6″ underdrain. 420 M. ft. B. M. Sheeting, shoring, etc. 600 lin. ft. manholes. 60 manhole frames and covers. 350 manhole steps. 12,200 lin. ft. excavation for house-connections. 13,750 lin. ft. vitrified and cast-iron pipe house-connections. 700 branches. 500 lin. ft. W. I. water supply pipe to manholes. 2,500 sq. ft. granolithic pavement relaid. 6,000 lin. ft. vitrified and other pavement relaid. 3 flush tanks.	$76,979.70	$84,748.50	99 per cent.

TABLE No. 3—*Continued.*

STATEMENT OF CONTRACTS LET DURING THE YEAR 1913, WITH PROPORTION OF WORK COMPLETED DECEMBER 31.

Contract.	Name of Contractor.	Date of Contract.	Principal Items of Work.	Lowest Bid.	Next to Lowest Bid.	Proportion of Work Completed Dec. 31, 1913.
Sanitary Contract No. 119, Lateral Sewers, District No. 44-A.	Gallagher, Boyle & Bryan.	Dec. 2, 1913	45,000 lin. ft. 8″ sewer.	$176,154.75	$180,017.90	10 per cent.
			2,525 lin. ft. 10″ sewer.			
			850 lin. ft. 12″ sewer.			
			1,225 lin. ft. 18″ sewer.			
			1,525 lin. ft. 20″ sewer.			
			775 lin. ft. 22″ sewer.			
			550 lin. ft. 24″ sewer.			
			25 cu. yds. rock excavation.			
			600 cu. yds. concrete masonry.			
			11,000 lin. ft. 4″ and 6″ underdrain.			
			840 M. ft. B. M. sheeting, shoring, etc.			
			2,900 lin. ft. manholes.			
			335 manhole frames and covers.			
			1,675 manhole steps.			
			34,300 lin. ft. excavation for house-connections.			
			34,975 lin. ft. vitrified and cast-iron pipe house-connections.			
			3,230 branches.			
			2,300 lin. ft. W. I water supply pipe to manholes.			
			6,000 sq. ft. granolithic pavement relaid.			
			13,500 lin. ft. vitrified and other pavement relaid.			

TABLE No. 3—*Continued.*

STATEMENT OF CONTRACTS LET DURING THE YEAR 1913, WITH PROPORTION OF WORK COMPLETED DECEMBER 31.

CONTRACT.	NAME OF CONTRACTOR.	DATE OF CONTRACT.	PRINCIPAL ITEMS OF WORK.	LOWEST BID.	NEXT TO LOWEST BID.	PROPORTION OF WORK COMPLETED DEC. 31, 1913.
Sanitary Contract No. 120, Locust Point Trunk Sewer, Section No. 2.	Whiting-Turner Construction Co.	Oct. 16, 1913	3,500 lin. ft. 30" sewer. 60 cu. yds. concrete masonry. 3,500 lin. ft. 4" to 6" underdrain. 415 M. ft. B. M. sheeting, shoring, etc. 1,500 lin. ft. piles. 220 lin. ft. manholes. 13 manhole frames and covers. 90 manhole steps. 1,650 lin. ft. excavation for house-connections. 1,790 lin. ft. vitrified and cast-iron pipe house-connections. 100 sq. ft. granolithic pavement relaid. 100 lin. ft. vitrified and other pavement relaid.	$55,947.50	$57,582.50	2 per cent.

TABLE No. 3—*Continued.*

STATEMENT OF CONTRACTS LET DURING THE YEAR 1913, WITH PROPORTION OF WORK COMPLETED DECEMBER 31.

Contract.	Name of Contractor.	Date of Contract.	Principal Items of Work.	Lowest Bid.	Next to Lowest Bid.	Proportion of Work Completed Dec. 31, 1913.
Sanitary Contract No. 121, Miscellaneous Lateral Sewers No. 6.	Whiting-Turner Construction Co.	Oct 8, 1913	8,925 lin. ft. 8″ sewer. 3,900 lin. ft. 10″ sewer. 1,550 lin. ft. 12″ sewer. 510 lin. ft. 15″ sewer. 20 cu. yds. rock excavation. 60 cu. yds. concrete masonry. 4,000 lin. ft. 4″ to 6″ underdrain. 258 M. ft. B. M. sheeting, shoring, etc. 850 lin. ft. standard manholes. 80 manhole frames and covers. 375 manhole steps. 15,100 lin. ft. excavation for house-connections. 15,600 lin. ft. vitrified and cast-iron pipe house-connections. 645 branches. 3,000 sq. ft. granolithic pavement relaid. 7,000 lin. ft. vitrified block and other pavement relaid.	$65,868.50	$74.615.00	99 per cent.
Sanitary Contract No. 122, High Level Interceptor, Section No. 9.	James Ferry & Sons.	Dec. 8, 1913	6,934 cu. yds. earth excavation. 2,397 cu. yds. rock excavation. 225 branches. 100 cu. yds. concrete masonry. 1,000 lbs, reinforcing steel. 3,100 cu. yds. embankment. 3,100 lin. ft. 6″ and 8″ underdrain. 150 M. ft. B. M. sheeting, shoring, etc. 28 manhole frames and covers. 140 manhole steps. 200 lin. ft. house-connections.	$52,426.90	$53,718.23	None.

TABLE No. 3 —*Continued.*

STATEMENT OF CONTRACTS LET DURING THE YEAR 1913, WITH PROPORTION OF WORK COMPLETED DECEMBER 31.

CONTRACT.	NAME OF CONTRACTOR.	DATE OF CONTRACT.	PRINCIPAL ITEMS OF WORK.	LOWEST BID.	NEXT TO LOWEST BID.	PROPORTION OF WORK COMPLETED DEC. 31, 1913.
Sanitary Contract No. 123, Lateral Sewers, District No. 7.	....		....	....	....	Bids rejected, and readvertisement postponed.
Sanitary Contract No. 124, Lateral Sewers, District No. 42.	Carozza Bros. & Co.	Dec. 31, 1913	17,000 lin. ft. 8″ sewer. 5,000 lin. ft. 10″ sewer. 800 lin. ft. 12″ sewer. 150 cu. yds. concrete masonry. 6,000 lin. ft. 4″ and 6″ underdrain. 410 M. ft. B. M. sheeting, shoring, etc. 1,350 lin. ft. manholes. 137 manhole frames and covers. 650 manhole steps. 12,800 lin. ft. excavation for house-connections. 13,775 lin. ft. vitrified and cast-iron pipe house-connections. 1,215 branches. 1,000 lin. ft. W. I. water supply pipe to manholes. 2,350 sq. ft. granolithic pavement relaid. 5,200 lin. ft. vitrified and other pavement relaid.	$80,552.25	$84,194.70	None.

TABLE No. 3—*Continued.*

STATEMENT OF CONTRACTS LET DURING THE YEAR 1913, WITH PROPORTION OF WORK COMPLETED DECEMBER 31.

Contract.	Name of Contractor.	Date of Contract.	Principal Items of Work.	Lowest Bid.	Next to Lowest Bid.	Proportion of Work Completed Dec. 31, 1913.
Storm-Water Contract No. 26.	McCarthy & O'Herron.	Apr. 14, 1913	3,305 lin. ft. 54"x36" to 78"x36" masonry drain. 11,585 lin. ft. 30" to 48" masonry drain. 335 lin. ft. 30" cast-iron pipe. 26,465 lin. ft. 12" to 24" T. C. pipe. 10,925 lin. ft. 12" to 18" inlet connections. 560 cu. yds. concrete masonry. 2,000 lbs. corrugated steel bars. 3,600 lbs. 6" to 12" "I" beams. 5,000 lin. ft. 4" to 8" underdrain. 560 M. ft. B. M. sheeting, shoring, etc. 1,500 lin. ft. piles. 600 cu. yds. rock excavation. 1,250 lin. ft. manholes. 220 manhole frames and covers. 1,200 manhole steps. 425 inlets.	$241,247.45	$250,874.05	Completed Dec. 15, 1913.
Storm-Water Contract No. 27.	Ryan & Reilly Company.	May 15, 1913	900 lin. ft. 30" masonry drain. 6,670 lin. ft. 12" to 24" T. C. pipe. 2,100 lin. ft. 12" to 18" inlet connections. 108 cu. yds. concrete masonry. 79 M. ft. B. M. sheeting, shoring, etc. 245 lin. ft. manholes. 200 cu. yds rock excavation. 73 inlets.	$29,025.05	$30,329.60	Completed Nov. 6, 1913.

TABLE No. 3—*Continued.*

STATEMENT OF CONTRACTS LET DURING THE YEAR 1913, WITH PROPORTION OF WORK COMPLETED DECEMBER 31.

CONTRACT.	NAME OF CONTRACTOR.	DATE OF CONTRACT.	PRINCIPAL ITEMS OF WORK.	LOWEST BID.	NEXT TO LOWEST BID.	PROPORTION OF WORK COMPLETED DEC. 31, 1913.
Storm-Water Contract No. 28.	Guild & Co.	June 24, 1913	1,550 cu. yds. excavation for 120″x108″ masonry drain. 3,305 lin. ft. 30″ to 36″ masonry drain. 13,635 lin. ft. 12″ to 24″ T. C. pipe. 4,565 lin. ft. 12″ to 18″ inlet connections. 85 cu. yds. brick masonry. 1,250 cu. yds. concrete masonry. 700 lbs. reinforcing steel. 1,400 lin. ft. 4″ to 8″ underdrain. 289 M. ft. B. M. sheeting, shoring, etc. 1,850 cu. yds. embankment. 183 inlets.	$83,718.10	$84,081.30	88 per cent.
Storm-Water Contract No. 29.	Whiting-Turner Construction Co.	July 12, 1913	485 lin. ft. excavation for 108″x36″ drain. 260 lin. ft. excavation for 60″x33″ drain. 80 lin. ft. 12″ to 18″ inlet connections. 715 cu. yds. concrete masonry. 48,000 lbs. corrugated steel bars. 740 lin. ft. 6″ to 8″ underdrain. 20 M. ft. B. M. sheeting, shoring, etc	$12,262.00	$14,830.50	Completed Dec. 1, 1913.

TABLE No. 3—*Continued.*

STATEMENT OF CONTRACTS LET DURING THE YEAR 1913, WITH PROPORTION OF WORK COMPLETED DECEMBER 31.

Contract.	Name of Contractor.	Date of Contract.	Principal Items of Work.	Lowest Bid.	Next to Lowest Bid.	Proportion of Work Completed Dec. 31, 1913.
Storm-Water Contract No. 30.	McCarthy & O'Herron.	Sept. 16, 1913	18,310 cu. yds. excavation for 12"x24" to 87"x120" masonry drain. 1,310 lin. ft. 6" to 24" T. C. pipe. 530 cu. yds. brick masonry. 5,785 cu. yds. concrete masonry. 65,000 lbs. corrugated steel bars. 5,800 lin. ft. 4" to 8" underdrain. 4,000 cu. yds, rock excavation. 2,700 cu. yds. embankment.	$93,916.75	$106,421.50	40 per cent.
Storm-Water Contract No. 31.	Ryan & Reilly Company.	Oct. 18, 1913	1,105 lin. ft. 30" to 33" masonry drain. 5,335 lin. ft. 12" to 24" T. C. drain. 880 lin. ft. 12" to 15" inlet connections. 105 cu. yds. concrete masonry. 1,100 lin. ft. 4" to 6" underdrain. 80 M. ft. B. M. sheeting, shoring, etc. 100 cu. yds. rock excavation. 500 lbs. reinforcing steel.	$26,542.90	$28,075.84	74 per cent.

TABLE No. 3—*Concluded.*

STATEMENT OF CONTRACTS LET DURING THE YEAR 1913, WITH PROPORTION OF WORK COMPLETED DECEMBER 31.

CONTRACT.	NAME OF CONTRACTOR.	DATE OF CONTRACT.	PRINCIPAL ITEMS OF WORK.	LOWEST BID.	NEXT TO LOWEST BID.	PROPORTION OF WORK COMPLETED DEC. 31, 1913.
Storm-Water Contract No. 32.	Guild & Co.	Nov. 12, 1913	1,550 cu. yds. excavation for 78″ drain. 1,760 lin. ft. 30″ to 42″ masonry drain. 1,320 lin. ft. 20″ to 24″ T. C. drain. 82 cu. yds. brick masonry. 730 cu. yds. concrete masonry. 1,000 lbs. reinforcing steel. 1,780 lin. ft. 4″ to 8″ underdrain. 150 cu. yds. rock excavation. 500 cu. yds. embankment.	$26,805.20	$27,697.70	55 per cent.
Storm-Water Contract No. 33.	Ryan & Reilly.	Dec. 26, 1913	5,215 lin. ft. 30″ to 50″x30″ masonry drain. 15,960 lin. ft. 15″ to 24″ T. C. drain. 3,750 lin. ft. 12″ to 18″ inlet connections. 410 cu. yds. concrete masonry. 2,400 lbs. reinforcing steel. 1,300 lin. ft. 4″ to 8″ underdrain. 205 M. ft. B. M. sheeting, shoring, etc. 50 cu. yds. rock excavation. 117 inlets.	$92,103.20	$93,664.00	None.

TABLE No. 4.

LENGTHS OF SANITARY SEWERS OF THE VARIOUS SIZES AND MATERIALS CONSTRUCTED TO DECEMBER 31, 1913.

Size and Shape.	Material.	Constructed Prior to 1913. Linear Feet.	Constructed During 1913. Linear Feet.	Constructed to Dec. 31, 1913. Linear Feet.
11′ x 12′ 3″ Horseshoe	Brick and Concrete	26,351.80	....	26,351.80
10′ 9″ x 12′ Horseshoe	Brick and Concrete	3,879.21	....	3,879.21
100″ Circular	Brick and Concrete	5,109.28	....	5,109.28
90″ Circular	Brick and Concrete	4,610.45	....	4,610.45
84″ Circular	Brick and Concrete	539.56	....	539.56
82″ Circular	Brick and Concrete	3,099.00	....	3,099.00
80″ Circular	Brick and Concrete	3,313.00	....	3,313.00
76″ Circular	Brick and Concrete	633.60	....	633.60
75″ Circular	Brick and Concrete	1,594.92	....	1,594.92
74″ Circular	Brick and Concrete	1,931.00	....	1,931.00
72″ Circular	Brick and Concrete	1,473.00	....	1,473.00
66″ Circular	Brick and Concrete	2,011.67	....	2,011.67
64″ Circular	Brick and Concrete	2,488.75	....	2,488.75
61″ Circular	Brick and Concrete	829.00	1,425.40	2,254.40
60″ Circular	Brick and Concrete	5,225.18	....	5,225.18
57″ Circular	Brick and Concrete	742.00	....	742.00
56″ Circular	Brick and Concrete	367.17	....	367 17
55″ Circular	Brick and Concrete	1,179.88	1,763.20	2,943.08
52″ Circular	Brick and Concrete	893.72	8,593.80	9,497.52
51″ Circular	Brick and Concrete	2,054.98	....	2,054.98
50″ Circular	Brick and Concrete	791.78	....	791.78
48″ Circular	Brick and Concrete	869.94	....	869.94
45″ Circular	Brick and Concrete	1,440.00	....	1,440.00
42″ Circular	Cast-Iron Pipe	11,979.63	449.40	12,429.03
36″ Circular	Cast-Iron Pipe	685.00	234.70	919.70
36″ Circular	Brick and Concrete	63.61	421.00	484.61
30″ Circular	Brick and Concrete	604.20	1,608.69	2,212.89

TABLE No. 4—*Concluded.*

LENGTHS OF SANITARY SEWERS OF THE VARIOUS SIZES AND MATERIALS CONSTRUCTED TO DECEMBER 31, 1913.

Size and Shape.	Material.	Constructed Prior to 1913. Linear Feet.	Constructed During 1913. Linear Feet.	Constructed to Dec. 31, 1913. Linear Feet.
30" Circular	Terra-Cotta Pipe	89.20		89.20
27" Circular	Brick and Concrete	3,474.60		3,474.60
27" Circular	Terra-Cotta Pipe	3,012.50	725.81	3,738.31
24" Circular	Terra-Cotta Pipe	9,701.46	2,169.53	11,870.99
24" Circular	Cast-iron Pipe	297.36		297.36
22" Circular	Terra-Cotta Pipe	12,807.81	1,855.24	14,663.05
20" Circular	Terra-Cotta Pipe	6,452.83	664.46	7,117.29
18" Circular	Terra-Cotta Pipe	9,204.84	1,574.83	10,779.67
16" Circular	Cast-Iron Pipe	1,240.44		1,240.44
15" Circular	Terra-Cotta Pipe	25,658.01	6,691.13	32,349.14
12" Circular	Terra-Cotta Pipe	28,096.14	14,355.32	42,451.46
10" Circular	Terra-Cotta Pipe	81,178.02	52,460.66	133,638.68
10" Circular	**Cast-Iron Pipe**	859.50		859.50
8" Circular	Cast-Iron Pipe	492.40	110.00	602.40
8" Circular	Terra-Cotta Pipe	556,632.24	154,489.18	710,989.42
Total length		823,958.68	249,592.35	1,073,551.03
House-connections		564,798.79	332,046.07	896,844.86
Grand total		1,388,757.47	581,638.42	1,970,395.89
Manholes		4,317	1,513	5,830
Lampholes		425	131	556
Spurs		48,656	17,001	65,657

TABLE No. 5.

LENGTH OF STORM-WATER DRAINS OF THE VARIOUS SIZES AND MATERIALS CONSTRUCTED TO DECEMBER 31, 1913.

SIZE.	MATERIALS.	CONSTRUCTED PRIOR TO 1913. LINEAR FEET.	CONSTRUCTED DURING 1913. LINEAR FEET.	TOTAL TO DEC. 31, 1913. LINEAR FEET.
Double Rectangular, 84" x 60"	Concrete and Brick (Reinf.)	108.30		108.30
Double Rectangular, 69" x 50"	Concrete and Brick (Reinf.)	2,856.91		2,856.91
Rectangular, 14' x 7' 6"	Concrete and Brick (Reinf.)	447.80		447.80
Rectangular, 132" x 66"	Concrete and Brick (Reinf.)		240.00	240.00
Rectangular, 108" x 36"	Concrete and Brick (Reinf.)		503.50	503.50
Rectangular, 78" x 36"	Concrete and Brick (Reinf.)		61.85	61.85
Rectangular, 72" x 51"	Concrete and Brick (Reinf.)	764.30		764.30
Rectangular, 72" x 36"	Concrete and Brick (Reinf.)		352.65	352.65
Rectangular, 72" x 30"	Concrete and Brick (Reinf.)		68.39	68.39
Rectangular, 69" x 36"	Concrete and Brick (Reinf.)	208.00		208.00
Rectangular, 66" x 45"	Reinforced Concrete	1,470.30		1,470.30
Rectangular, 64" x 31"	Concrete and Brick (Reinf.)		21.90	21.90
Rectangular, 62" x 42"	Concrete and Brick (Reinf.)		1,660.68	1,660.68
Rectangular, 60" x 42"	Concrete and Brick (Reinf.)	785.90		785.90
Rectangular, 60" x 33"	Reinforced Concrete		237.00	237.00
Rectangular, 60" x 30"	Concrete and Brick (Reinf.)	76.79	323.70	400.49
Rectangular, 56" x 42"	Concrete and Brick (Reinf.)		432.72	432.72
Rectangular, 54" x 36"	Concrete and Brick (Reinf.)		375.55	375.55
Rectangular, 52" x 36"	Concrete and Brick (Reinf.)		401.80	401.80
Rectangular, 48" x 48"	Concrete and Brick (Reinf.)		120.00	120.00
Horseshoe, 12' 3" x 12' 3"	Concrete and Brick		2,509.00	2,509.00
Horseshoe, 12' 0" x 12' 0"	Concrete and Brick		1,717.93	1,717.93

TABLE No. 5—*Continued.*

LENGTH OF STORM-WATER DRAINS OF THE VARIOUS SIZES AND MATERIALS CONSTRUCTED TO DECEMBER 31, 1913.

SIZE.	MATERIALS.	CONSTRUCTED PRIOR TO 1913. LINEAR FEET.	CONSTRUCTED DURING 1913. LINEAR FEET.	TOTAL TO DEC. 31, 1913. LINEAR FEET.
Horseshoe, 138" x 132"	Concrete and Brick (Reinf.)	125.13		125.13
Horseshoe, 138" x 99"	Concrete and Brick (Reinf.)	2,212.22		2,212.22
Horseshoe, 120" x 108"	Concrete and Brick		385.00	385.00
Horseshoe, 120" x 87"	Concrete and Brick		49.00	49.00
Horseshoe, 120" x 75"	Concrete and Brick		1,250.00	1,250.00
Horseshoe, 114"	Concrete and Brick	244.65		244.65
Horseshoe, 96" x 93"	Concrete and Brick	56.00		56.00
Horseshoe, 87"	Concrete and Brick	1,300.28		1,300.28
Double Line, 30"	Cast-Iron Pipe	645.17		645.17
Circular, 144"	Concrete and Brick		160.00	160.00
Circular, 120"	Concrete and Brick		9.22	9.22
Circular, 114"	Concrete and Brick	1,112.69		1,112.69
Circular, 96"	Concrete and Brick	3,451.55		3,451.55
Circular, 78"	Concrete and Brick		150.00	150.00
Circular, 72"	Concrete and Brick	1,259.91	29.50	1,289.41
Circular, 69"	Concrete and Brick	1,926.04	725.00	2,651.04
Circular, 66"	Concrete and Brick	169.35		169.35
Circular, 62"	Concrete and Brick (Reinf.)	245.64		245.64
Circular, 60"	Concrete and Brick	233.09	329.82	562.91
Circular, 57"	Concrete and Brick	83.47		83.47
Circular, 54"	Concrete and Brick		617.98	617.98
Circular, 54"	Concrete and Brick (Reinf.)	1,753.05		1,753.05

TABLE No. 5—*Continued.*

LENGTH OF STORM-WATER DRAINS OF THE VARIOUS SIZES AND MATERIALS CONSTRUCTED TO DECEMBER 31, 1913.

Size.	Materials.	Constructed Prior to 1913. Linear Feet.	Constructed During 1913. Linear Feet.	Total to Dec. 31, 1913. Linear Feet.
Circular, 50"	Concrete and Brick	....	13.00	13.00
Circular, 48"	Concrete and Brick	714.84	29.00	743.84
Circular, 48"	Cast-Iron Pipe	41.99	....	41.99
Circular, 48"	Brick	1,453.27	4.00	1,457.27
Circular, 48"	Concrete	1,624.25	2,701.55	4,325.80
Circular, 45"	Concrete	471.51	....	471.51
Circular, 42"	Cast-Iron Pipe	34.35	184.00	218.35
Circular, 42"	Brick	1,689.96	....	1,689.96
Circular, 42"	Concrete and Brick	1,751.59	12.26	1,763.85
Circular, 42"	Concrete	4,132.47	4,301.56	8,434.03
Circular, 36"	Cast-Iron Pipe	24.00	162.00	186.00
Circular, 36"	Brick	648.97	7.16	656.13
Circular, 36"	Concrete and Brick	7,223.91	25.00	7,248.91
Circular, 36"	Concrete	11,014.43	8,810.70	19,825.13
Circular, 33"	Brick	44.35	51.45	95.80
Circular, 33"	Concrete and Brick	8,004.61	....	8,004.61
Circular, 33"	Concrete	2,642.60	7,150.44	9,793.04
Circular, 30"	Cast-Iron Pipe	1,028.33	1,598.25	2,626.58
Circular, 30"	Brick	235.67	25.78	261.45
Circular, 30"	Concrete and Brick	10,296.51	38.09	10,334.60
Circular, 30"	Vitrified Pipe	2,452.19	....	2,452.19
Circular, 30"	Concrete	9,371.77	16,896.36	26,268.13

TABLE No. 5—*Concluded.*

LENGTH OF STORM-WATER DRAINS OF THE VARIOUS SIZES AND MATERIALS CONSTRUCTED TO DECEMBER 31, 1913.

Size.	Materials.	Constructed Prior to 1913. Linear Feet.	Constructed During 1913. Linear Feet.	Total to Dec. 31, 1913. Linear Feet.
Circular, 27"	Terra-Cotta Pipe		365.31	365.31
Circular, 24"	Cast-Iron Pipe	500.00	419.63	919.63
Circular, 24"	Terra-Cotta Pipe	47,706.56	20,976.43	68,682.99
Circular, 20"	Cast-Iron Pipe	410.83	100.80	511.63
Circular, 20"	Terra-Cotta Pipe	18,418.72	15,177.06	33,595.78
Circular, 18"	Terra-Cotta Pipe	41,397.79	28,964.92	70,362.71
Circular, 18"	Cast-Iron Pipe	26.50		26.50
Circular, 16"	Cast-Iron Pipe	38.70	653.80	692.50
Circular, 15"	Terra-Cotta Pipe	35,068.61	28,691.22	63,759.83
Circular, 12"	Terra-Cotta Pipe	6,597.57	1,813.82	8,411.39
Circular, 12"	Cast-Iron Pipe		170.00	170.00
Circular, 10"	Cast-Iron Pipe	190.00	1,339.34	1,529.34
Circular, 10"	Terra-Cotta Pipe		237.00	237.00
Circular, 8"	Cast-Iron Pipe	156.93	220.07	377.00
Circular, 8"	Terra-Cotta Pipe		52.00	52.00
Circular, 6"	Cast-Iron Pipe	219.84	173.78	393.62
Circular, less than 6"	Terra-Cotta Pipe		70.00	70.00
Jones Falls Conduits	Reinforced Concrete	2,589.00	3,721.00	6,310.00
Totals		239,759.16	157,888.97	397,648.13
Inlet Connections, 10" to 20"		60,169.59	40,895.11	101,064.70
Grand totals		299 928.75	198,784.08	498,712.83
Inlets and Catch Basins		2,086	1,640	3,726
Manholes and Drop Wells		1,469	848	2,317
Lampholes			12	12

ANNUAL REPORT

OF THE

TOPOGRAPHICAL SURVEY COMMISSION

1797

To the Mayor and City Council of Baltimore for the
Fiscal Year Ended December 31, 1913

BALTIMORE
MEYER & THALHEIMER
CITY PRINTER

1914

MAYOR'S OFFICE,

BALTIMORE, March 7, 1914.

To the Honorable the Mayor and City Council of Baltimore.

GENTLEMEN—The Topographical Survey Commission respectfully begs to submit the following report of its Chief Engineer.

Very respectfully,

JAMES H. PRESTON, *Mayor,*
JAMES F. THRIFT, *Comptroller,*
RICHARD GWINN, *Register,*

Topographical Survey Commission.

REPORT OF THE

CHIEF ENGINEER

TO THE

TOPOGRAPHICAL SURVEY COMMISSION

FOR THE YEAR 1913

CITY OF BALTIMORE TOPOGRAPHICAL SURVEY

Baltimore, December 31, 1913.

To the

Hon. James H. Preston, *Mayor,*
Hon. James F. Thrift, *Comptroller,*
Hon. Richard Gwinn, *Register,*
Topographical Survey Commission.

Gentlemen—In submitting the annual report of this Department for the year 1913, the data will be restricted more to the actual work embraced during the period, together with some recommendations for future improvements. During the past three years, especially, it has been the policy of the Department to dwell at some length on matters slightly beyond the narrower scope of its duties; or, in other words, in discussing various civic improvements, the reports have diverged from the purely elementary character of the problems, and the effort was made to discuss them from the standpoint of the broader principles of city planning involved. But during the past year our efforts were devoted to the greater extent to work which has been mentioned before in those reports, so for that reason the following comment will be limited.

The past year has been a busy one, and in reviewing the accomplishments we feel there is good reason for gratification. Quite an amount of new work has been evolved, some of it carried to its conclusion; but, mostly, the Department's efforts have been devoted to the carrying out of plans promoted during the past two years.

Streets in Connection with the State Roads Commission's Fund.

Following the policy adopted a few years ago, the Survey has continued during the past year to exercise supervision over the work done by the State Roads Commission within the city. This supervision consists mainly in arranging a cooperation between the Commission, the various city departments and the public service corporations having construction work in the beds of the roads being improved. The plan has worked well, and, we believe, to the general satisfaction of all concerned. Our associations with the Commission, its chief engineer and its other representatives have been most harmonious—indeed, cordial—and our every request has received prompt compliance.

Falls Road, Harford Road and Garrison Avenue.

Previous to this year the above roads were completed. There is, however, a short stretch on Garrison avenue (or rather its diversion northwesterly), Berwin avenue and a portion of Liberty Heights avenue which are not yet improved. This is due to a disagreement between the city and certain property-owners regarding the sewerage question. It is very unfortunate that such a matter should delay a condition badly in need of remedy. However, all possible paving is now going on, subject to the final adjustment of this question.

Frederick Road.

Work has progressed very satisfactorily on this road, and the end of the year finds the paving and the curbing almost completed. This is the case with the entire length, with the exception of the short stretches at the crossing of the two bridges—at Gwynn's Run and at Gwynn's Falls. The former only needs a few finishing touches to complete it, and the Gwynn's Falls Bridge, which is quite a long and elaborat one, is about 60 per cent. completed, and with workabl weather, and barring contingencies, the road should be entirely completed before summer. The paving and curbing now finished embrace a length of 1.5 miles, with 1,000 feet yet to be done.

Reisterstown Road.

This has probably been the biggest work undertaken by the State Roads Commission for the city. The road was widened quite a good bit, and this necessitated many delays in securing the land required. Practically all of the city constructional departments and the public service corporations had extensive and costly operations in the bed of the road, and it required constant attention to work out an harmonious plan of action.

From Liberty Heights avenue to the Pimlico Circle all of the underground work is finished; and along Brown's Hill, south from Liberty Heights avenue, all arrangements have been made for the subway work, and this section, too, should be completed very shortly.

The grading, except a few minor smoothing-ups, is completed through the length, except, however, the more than half of the Pimlico Circle which the Commission will improve in connection with the road; but this is comparatively a small job and will take only a short time. In all, 87,300 cubic yards of earth have been removed throughout a length of just about a mile.

A portion of the paving between Liberty Heights avenue and the Circle has been laid and the car tracks have been removed to the center on a private right-of-way which they will occupy along this stretch. But paving, for the time being, has been suspended on account of the risk of poor work during cold weather.

Liberty Heights Avenue.

This old road is, potentially, one of great service. It is a diagonal one leading from a well-developed section—Forest

Park, West Arlington and neighboring communities—to what will, when it is completed, be one of our greatest arteries of travel in the city—the Reisterstown road. But, due to its lack of paving, its grade crossing at the Western Maryland Railroad, but still more to its prohibitive grades as now exist, it has been for years almost a deserted way.

The plans for the betterment of Liberty Heights avenue are quite comprehensive, but as they have all been discussed and described in previous reports of this Department they will be omitted here. It has taken quite a good bit of maneuvering and discussion to obtain the extra strips needed for the adopted plans for the widening of this road; but, we are happy to say, this has finally been accomplished, the advertisement for the grading has been published and the bids will be opened on January 26. So, within a year, surely, the city should possess another wide, adequate thoroughfare.

Hanover, Cromwell and Light Streets.

The above streets form the approaches to Light Street Bridge—an highly important entrance to the city. They were all improved in part by the Commission. Hanover street was paved from Cromwell street to Cross street; Cromwell street, from Hanover street to Light street; and Light street, from Cromwell street to the bridge. The Hanover street paving extended a little over a mile, and the Light street paving just about a half a mile, making a total amount of paving for those three streets in South Baltimore of about 1.7 miles. This whole section has been much improved by this paving, for it affords what was formerly lacking—a decent way from Anne Arundel county to the city. Of course, what will do still more to provide an adequate way along this route is the replacement of Light Street Bridge.

South Baltimore Improvement.

The Light Street Bridge is far from being the only needed improvement for South Baltimore. The street system, as a whole, is very bad; or, rather, there are not enough streets. The first section of Key Highway gave us a wedge, so to speak, from the north for the betterment of this section; and the second section, the surveys and plats for which were prepared by this Department during the year, gives us still further means for working out an adequate system of streets.

The whole area south of Lee street, between the Northwest and Middle Branches of the Patapsco River, was thoroughly studied two years ago and plats and quite a detailed report were submitted to the Commission on City Plan by this Department. Since then the matter has been continually discussed; and, under instructions from his Honor, Mayor Preston, the City Engineer, the Harbor Engineer and the Chief Engineer of this Department, composing a committee, have submitted various recommendations. This committee has consulted with the engineers of the Baltimore and Ohio Railroad Company, which proposes to build a new freight line and very extensive additions to its yards on Locust Point, and with Mr. Collin McLean, who owns considerable property on the south shore of the Point and who has under consideration the building of large piers.

The first move to be made as a result of the committee's study of the situation, and following instructions from his Honor, Mayor Preston, is for the opening of a street from a point near the southeastern end of Fort avenue, southwesterly at right angles to the avenue, to a point 1,400 feet from the proposed relocation of the pierhead line; thence northwesterly, parallel to the pierhead line, to a point just about south of the Baltimore and Ohio Railroad round-houses; from this point a bend is made to meet the extension of McComas street easterly from Light street.

Also, in connection with the same opening, it is proposed to extend Woodall (formerly Allen) street to meet Key Highway to the north and to join in with the waterfront street, just mentioned, on the south. These openings, it is felt, will be of great importance to South Baltimore, for they will determine, to a marked extent, all future development of the section. Surveys are now being made by this Department for these openings, and early during the coming year the plats will be completed and filed and the ordinances introduced.

MILLS ROAD.

Of the entirely new highways planned for the future, plats and descriptions drawn and ordinance passed during the past year, Mills road is probably of greatest importance. It was fully described in last year's report under the head of "Hampden-Woodberry Connection." And that, in brief, is what it is, for it begins at Chestnut avenue and Thirty-third street (formerly First avenue) in Hampden and, by a curvilinear route, reaches the heart of the Woodberry section at Woodberry and Railroad avenues. These two sections are almost isolated from each other, and Mills road, besides giving an excellent connection between them and also to the center of the city, will promote development along desirable lines.

VARIOUS IMPORTANT STREET OPENINGS.

Grouped under the above caption it is difficult to say which streets should be given precedence; each has its own particular sphere of usefulness. The opening and widening of Aisquith street by a diversion around McKim School, the preservation of this historic and classic structure, and the general rearrangement of the car tracks in this immediate neighborhood by their removal entirely from Fayette street; this is all in class by itself, so to speak, and was all accomplished during the past year.

Ellicott Driveway.

The acquiring of the Westcott property fronting on Frederick road and extending back along Gwynn's Falls nearly to Edmondson avenue, not only aided greatly the construction of the Frederick Road Bridge over the Falls, but it also secured the major portion of the right-of-way, for an outlet from Gwynn's Falls Park at Franklin road southerly to Frederick road. All of the property needed has not yet been acquired, nor have the final plans been completed for this latter project, but the movement is well advanced and the coming year should witness its completion. The following report describes, somewhat in detail, the route, its advantages and its relationship to the contiguous territory; it is as follows:

BALTIMORE, MD., April 4, 1913.

HON. JAMES H. PRESTON,

Mayor of Baltimore, City Hall, City.

DEAR SIR—In conformity with your verbal request made some time ago, I beg to submit herewith my recommendations, together with a map, for the contemplated driveway between Frederick road, Franklin road and Gwynn's Falls Park.

The driveway throughout most of its length, which is a little over a mile, follows very closely the bed of the old mill-race. Over three-quarters of the required right-of-way is now owned by the city; it having been acquired by the city with the purchase of the Westcott property (outlined in brown on the map). This right-of-way ends at the dam just south of Edmondson avenue, and from this point northward a narrow strip, not exceeding forty feet, will have to be acquired from four different property-owners.

Between the dam and Edmondson avenue the property is owned by the Western Cemetery; and, although it would probably be useless to try to condemn the roadway through it, it is strongly felt that the owners of the cemetery would have no objection to the presence of the road, and it is very likely that satisfactory arrangements could be made.

The proposed route carries the road under the Edmondson Avenue Bridge, through an arch already provided for it, and then winds around the foot of a rocky hillside through the Shipley and Vickers properties, on the latter of which a diversion is made and the driveways extend in two directions—one road winds around to the eastward to meet the intersection of Lanvale street, Longwood street (formerly Eighth street) and Franklin road; this is the high elevation road and it is to serve as an outlet to the eastward along Lanvale street and to Edmondson avenue, via Longwood street or Franklin road.

The land just north of the Edmondson Avenue Bridge is of rugged character, wooded with a very good grove of trees, and would afford a very picturesque park bordering on Gwynn's Falls. So, in connection with the acquiring of the strip needed for the roadway, it is suggested to make the width excessive along this portion, so as to permit of a small park bounded by Edmondson avenue, Rosedale street (formerly Ninth street) and its connection easterly to Longwood street and the proposed driveway. This land, owing to its steepness, is practically incapable of being developed for building purposes, and if it can be purchased at a reasonable amount it would certainly add greatly to the attractiveness of the driveway. This land is outlined on the map in a faint green; the present park holdings are outlined in a deeper green.

The other branching road runs northerly to meet Franklin road at the intersection of the proposed extension of Mosher street; this is the direct connection, via Franklin road, to Gwynn's Falls Park. It is a low elevation road on an easy grade and would form an important connection not only with the park, but, by Franklin road, to the Patapsco River, and by other roads, connecting with Franklin road, far into Baltimore county. In this connection, it might be well to stat that a plat is now being prepared by this Department for the extension of Mosher street, from Payson street to Franklin road; this i to serve, besides street purposes, as an outlet from Gwynn's Falls Park to the eastward.

To the south the main driveway would connect with Frederick road and thence to the westward with Brunswick street and on into the important thoroughfare of Wilkens avenue.

Also (but this is a future possibility, if not a probability) the pr posed driveway is designed to connect with the extension of Balt more street west of Garrison avenue, as now in process of condemnation and shown on the plat. Should Baltimore street be constructe in the future it would form an important connection with the driv way; but, aside from this, the location of the driveway is such as make it a very useful thoroughfare, as well as an attractive park driveway, and it would certainly be of marked value in aiding transportation in this comparatively isolated section of the city.

The right-of-way of the Western Maryland Tidewater Railroad is shown on the map outlined in pink; and it can readily be seen that the railroad will interfere in no way with the proposed driveway. On the other hand, the railroad company, in acquiring its right-of-way through this section of the city, in many instances bought more land than it actually needed for constructional purposes and it now lies vacant. Many of these small parcels could be well utilized by the city in adding to the attractiveness of the driveway and Gwynn's Falls Park, and those that are deemed worthy for this purpose, as well as a few other scattered parcels, are shown in light green on the map.

On portions of the driveway it is proposed to widen it out in places, affording good views for outlook, where vehicles could stop without blocking the main driveway. But this detail, as well as many others, is not shown on the map, which is intended merely for a preliminary study.

Very respectfully,

(Signed) Jos. W. Shirley,

Chief Engineer.

The extension of Mosher street, from Payson street to Franklin road, will afford a connection to Gwynn's Falls Park from the east; and, although the plans which were prepared and filed are now being modified to curtail the expense of the condemnation, the plat and description should both be finished early in January.

The Alameda, the final link in the connection all the way from Druid Hill Park to Clifton Park, was adopted during the past year on a compromise plan; and, although not what we desired in alinement, it will, nevertheless, afford a very desirable improvement.

Upon the request of the Commissioners for Opening Streets, the Department prepared the opening and widening plat for Starr lane (formerly Old York road), from Gorsuch avenue to the northern boundary of the city. It is the intention to pave this road during the coming year; and, on the widened basis, this should satisfy a long-felt want.

Aside from the foregoing, and the projects mentioned under special headings, the following is a list of the more important plats which were prepared during the past year. This list does not include many location plats and work in connection with them, which were furnished to practically all the departments of public improvements. The list is as follows:

Plat for the opening of Spring Garden avenue, from Hanover street to Light street.

Plat for the opening of Linwood avenue, from Boston street to the waters of the Patapsco River.

Plat for the opening of Wyanoke avenue, from Greenmount avenue to Pen Lucy avenue.

Plat for the opening of Wicomico street, from Bush street to Stockholm street.

Plat for the opening of Hamburg street, from Bush street to Stockholm street.

Plat for the opening of a street, 66 feet wide, from Brunswick street to Frederick avenue.

Preliminary plat for the opening of Monastery avenue, from Frederick road to Old Frederick road.

Preliminary plat for the opening of Walbrook avenue, from Fulton avenue to Pennsylvania avenue.

Preliminary plat for the opening of Morling avenue, westerly from Falls road.

Preliminary plat for the opening of Woodland avenue, from Garrison avenue to Wolcott avenue.

Preliminary plat for the opening of Baltimore street, from Garrison lane to property of Mayor and City Council of Baltimore.

Plat for the widening of Ostend street, from Howard street to Plum alley.

Plat for the widening of Centre street, from St. Paul street to Davis street.

Plat for the widening of Brunswick street, from Lehman street t Frederick road.

Preliminary plat for the widening of Broadway by the condemnation of a lot of ground at the southwest corner of Broadway and Thame street.

Preliminary plat for the widening of Cross street, from Howard street to Plum alley.

Preliminary plat for the opening and widening of Courtland street, from Franklin street to Centre street.

Preliminary plat for the opening and widening of Traction street, from Pennsylvania avenue to Woodbrook avenue.

Preliminary plat for the opening and widening of Covington street, from Fifth lane to Gittings street.

Preliminary plat for the opening and widening of Dellwood avenue, westerly from Falls road.

Preliminary plat for the opening and widening of Walrad street, from Collins street to Loudon avenue.

Preliminary plat for the condemnation and widening of Elgin avenue, from Reisterstown road to Pulaski street.

Preliminary plat for the closing of a portion of Nursery alley, in the vicinity of Preston street.

Preliminary plat for the closing of several portions of Harford road.

Plat showing amendment to the general plan of streets, as adopted by Ordinance No. 129, approved December 3, 1898.

Plat of Old Marine Hospital tract and adjoining property to the west thereof, to determine the proposed division line between the Mayor and City Council of Baltimore and William H. Wagner, trustee (platted from deeds and old plats).

Topography map around a portion of northwest section of Bay View (contour interval, one foot).

NEW MAP OF CITY.

A special appropriation was made during the early part of 1913 for compiling a complete map of the city on the scale of 500 feet to one inch. This proved a more tedious project than was first expected, and the map was not completed until December. Various methods are being investigated for its publication, and some arrangement will be decided upon very soon, so that it will be ready for distribution early in the new year.

The map, while drawn to an accurate scale, will prove of more use for index purposes and for general consulting of street locations than for purely engineering purposes. It is expected to satisfy a long-felt demand in most of the departments, and it will, of course, save the departments a great deal of duplicate work.

Green Spring Parkway and Woodberry Avenue.

These two streets are closely related, especially near their junction with the Pimlico Circle. The troubles with the Green Spring Parkway have been numerous, nor are they yet over. Woodberry avenue is the only connection from a large neighborhood centering around this location to Woodberry and Hampden, and with the event of the parkway and the grading of the Circle the difficulty of making this avenue a serviceable one will be greatly increased. We have had the matter under most careful consideration during the whole of the year, and we still hope to be able to work out a method whereby both roads may be constructed along proper lines.

Gwynn's Falls Parkway.

This important boulevard connection received during the year an impetus which would seem, from all indications, to make it an actuality. There may, of course, be other serious obstructions to be overcome, but the outlook would certainly seem bright. Relative to the whole subject, it might be of interest to quote here a report submitted by the Department during the past year; it is as follows:

September 4, 1913.

Hon. James H. Preston,

Mayor of Baltimore, City Hall, City.

Dear Sir—From a news item reporting Tuesday's meeting of the Board of Estimates we note that approval was given to the condemnation of Gwynn's Falls Parkway, and as this project is one in which we have taken a keen interest, having designed a major portion of it.

we wish to put ourselves on record as endorsing the move most enthusiastically from all points of view, especially in relation to the street plan.

We have followed the course of this condemnation from its origin, and we have on file much data referring to various stages of it, which may be of service to you.

Briefly, our idea of the proposition is that the right-of-way should, by all means, be obtained now. We feel there is no immediate need for the construction of the boulevard as a whole, but the day is not so far distant when this must take place, and we feel that it would be the grossest kind of an error to miss the opportunity to acquire the necessary property. The right-of-way can never be obtained at a lower figure, and from a most careful study of the entire neighboring section we are most strongly of the opinion that no other adequate connection of this character, even though on a greatly modified width, can be acquired and constructed at less expense.

The parkway will connect two of our finer and greater parks, equal, we believe, to the best in other cities, and we feel that it would be very unfortunate to abandon the most important link of our superb chain of parks and park connections. There already exist too many bad examples of this "penny-wise" policy, and it is high time we were taking heed of our costly lessons of the past.

In the twenty-fourth annual report of the City Parks Association of Philadelphia, Mr. Andrew Wright Crawford makes the following comment which, we think, is especially appropos to the Gwynn's Falls Parkway:

"The recourses of a city fortunately increase with its needs. Failure to appreciate the fact that the annual income from taxation will be larger and the annual addition to the borrowing capacity of the city will be greater with each succeeding year, is the reason why the larger and larger plans prepared annually appear to be exceeding the capacity of the city. Any plan to be carried out in twenty-five years, for which the present capacity of the city is sufficient, is to be judged, because of that fact alone, as probably inadequate, as providing for a result at the end of those twenty-five years that will, in all probability, be entirely too small for the then existing needs."

On page 36 of this Department's last annual report (a marked copy of which we are forwarding to you herewith) is given a quotation which we also think very appropriate to the condemnation of Gwynn's Falls Parkway. On pages 19, 20, 42 and 44 are also quotations which we think apt to the subject.

Summed up, the objections to the parkway seem to arise purely from the adjustment of the benefits and damages and not from the broader point of view as to the worthiness of the scheme as a whole. And should this be true our efforts should be to study this phase of the subject, rather than to abandon a large improvement for the future on that account. But this, we feel, is a matter that can be adjusted, and the acquiring of the right-of-way of this important highway should by no means be side-tracked for what certain property-owners now consider a hardship.

The parkway is a most striking example of the great difficulty the city experiences in preventing buildings from being erected in the beds of streets in process of condemnation. It is interesting to note that, in this instance, the number of houses that have been erected since the proceedings were started. In each case we have made all possible efforts to prevent such erections, but, unfortunately, in many cases we failed. In some cases, however, the builders did conform to the lines of the parkway, and where this was done we believe the owners would now be injured if the plans of the parkway were abandoned.

Very respectfully,

(Signed) Jos. W. Shirley,

Chief Engineer.

Central Business Section Street Conditions.

The movement for a good thoroughfare from the northern section of the city to the down-town section, along the route of St. Paul street, has received quite a bit of agitation of late, and, as you will recall, this Department has made various studies for its improvement. We feel that the Calvert street terminal project is one, the solution of which will have a marked bearing on the form of improvement best suited to St. Paul street; but, in view of conditions as they now exist, we feel that one proper step for the city to undertake would be for the elimination of the off-set at Saratoga street by th widening of St. Paul street northerly on the east side, and southerly on the west side. This would give a straight thoroughfare from Lexington street to Hamilton street, a little over 7 feet in width. By so doing, the property on the east side, running back to Courtland street, would be badly cut up; and this, it is suggested, be all acquired and the remnants be redivided and sold. Or, in other words, excess condemnation or some similar method whereby the same results may be accomplished be employed. This a is departure from old methods, but it is one that has received the approval of the most eminent authorities on civic development, and for the welfare of the city it is to be hoped that suitable ways and means may be found for its accomplishment.

Relative to the various projects mentioned under the above caption is submitted the following reports, which discuss somewhat in detail the problems involved. The first report discusses the corelationship between the betterment of the Calvert street terminal, the Fallsway and neighboring intersecting streets. It is as follows:

May 29, 1913.

Hon. James H. Preston,
Mayor of Baltimore, City Hall, City.

Dear Sir—At the conference held this morning between the city and the Pennsylvania Railroad Company the plans submitted disclosed a situation which we think of such importance, at this time, as to merit special consideration.

You will recall that the plans submitted call for the building of a viaduct over Madison street and the railroad trackages, extending from Calvert street to Constitution street. Should this scheme be considered advisable, which, in the development of the freight yards in this neighborhood, would certainly seem appropriate, we feel that the resultant condition relative to the Fallsway should, at this time, received marked attention.

We understand that the contract for the Fallsway viaduct has just been awarded; if, as now planned, the viaduct is to meet Madison street at its present grade there would result, unless changes be made, a marked difference in the elevation of the Fallsway and that of the suggested Madison street viaduct. We feel, then, that it is important that consideration be given the matter at this time, so that if it is thought well to have a connection between the Madison street viaduct and the Fallsway that such arrangements should be made very soon.

If it is deemed wise to have such a connection between the two viaducts (and this would seem very desirable in view of the importance of Madison street as a through east and west thoroughfare, affording good connections with other streets) arrangements could be made so as to raise the elevation of the Fallsway, from Eager street south, to bring it to the grade of the proposed Madison street viaduct.

In our original study of the Fallsway project, as requested by the Commission on City Plan, we gave the Madison street crossing special study and discussed and suggested that some arrangements be made (similar to the above) for doing away with the grade crossings at this important intersection. For we felt that, even though no new lines were then proposed by the railroad company, the yard system was inadequate and that it would eventually be necessary to make radical changes. But as our alinement for the Fallsway was not adopted by the commission this detail, of course, received little consideration. We feel now, however, in view of present conditions, that we should call your attention to this matter, for if it is deemed feasible to make such changes it will certainly be less expensive to make them now than at any time in the future.

Very respectfully,

(Signed) Jos. W. Shirley,

Chief Engineer.

The following report treats of St. Paul street, with a view of making it an adequate thoroughfare from the northern residential section to the central business section:

December 16, 1913.

Hon. James H. Preston,

Mayor of Baltimore, City Hall, City.

Dear Sir—In conformity with your instructions, we are submitting to you herewith our study for the treatment of St. Paul street, north of Lexington street.

The improvement of St. Paul street should, properly considered, embrace many attributes, chief among these being the disposition of the Calvert street terminal problem, and no comprehensive scheme for the street system in this section of the city can be properly planned with this important factor eliminated.

The viaduct suggested for the betterment of the crossing at Centre street seems a move in the right direction, but we are not prepared at this time to give it our endorsement. There are, of course, various ways of treating such a condition, and in this, too, are involved many highly important factors. We think it hardly wise to state at this time whether this viaduct should be a through one, along the center of St. Paul street, as has been suggested, or whether there should be two viaducts for the north and south travel, one on each side of the street, leaving the center near its present elevation for diversion of traffic seeking an outlet to Centre street. In such a treatment, St. Paul street must, of course, be widened. An important influence for the adoption of either plan should be the ultimate nature of the business occupying buildings facing on the street.

We feel that at present there is no crying need for either structure over Centre street, especially as the extension and widening of Courtland street is now in process of condemnation, and this should do a great deal to relieve the situation. It may be that when conditions demand further treatment, when we shall have better information relative to the disposition of the plans of the Pennsylvania Railroad, and we shall know better the nature and amount of the traffic to be handled, that a remedy can then be found other than building an expensive viaduct.

Centre street will certainly need to be widened in the future; and, in conjunction with this, if there is felt a need for the segregation of the traffic on St. Paul street and on Centre street, then a viaduct may be necessary. But we feel now that it is too early, considering the many factors involved, to plan a proper treatment. Should such segregation not be deemed necessary, the grade at the intersection, which is now bad, could certainly be improved by extending St. Paul street, from the south, northerly in a straight line to Centre street, and from this intersection northerly to provide for a diagonal street to meet St. Paul street again at Monument street. In other words, the bend in St. Paul street would be made to the north of Centre street, instead of to the south, as it now is.

Several plans could be enumerated for the betterment of the crossing at St. Paul and Centre streets, but we feel very strongly, as you mentioned in your letter of December 11 to the City Solicitor, that this matter can very well wait, for a while at least. We also coincide with your view that the widening of St. Paul street should be begun early.

It would certainly be most desirable to adopt the principles of excess condemnation in the widening of St. Paul street; that is, the effort should be made and the courts rule on the constitutionality of the proceedings. Chapter 166, page 583, Laws of Maryland, 1908, would seem, from the layman's point of view, to give the necessary power;

but if additional authority is needed we should certainly obtain it from the coming session of the General Assembly.

In the Kingsway of London, now so often referred to relative to improvements of large scope, "recoupment," or excess condemnation, was employed. To us the noteworthy feature of this project was not so much that authority was given and approved to recoup, by the means employed, the expenses of the undertaking, but rather the very successful manner in which it was done. It was a tremendous undertaking and, from what we have learned from reports, the indications are that the final cost to the tax-payers will be nothing, or certainly very little. A great deal can be said for such a scheme; also, probably, something against it, but we can feel that excess condemnation has received the enthusiastic approval of the highest authorities the world over on city planning, and the St. Paul street project is an almost ideal site on which to employ it.

Summed up, our recommendations, restricted in scope owing to lack of information needed for a more comprehensive scheme, are as follows:

We think the present east line of St. Paul street, between Lexington and Saratoga streets, should be extended in a straight line northerly to Hamilton street, and the present west line of St. Paul street, between Hamilton and Saratoga streets, should be extended in a straight line southerly to Lexington street. This would give St. Paul street, between the limits of Lexington and Hamilton streets, a width varying from 71 to about 73 feet—approximately the same width as Charles street, south of Fayette street. There should be no off-sets as is now the case, and without car lines this width should be ample for the requirements.

We think the land embraced in the area bounded by St. Paul, Saratoga, Courtland and Hamilton streets should all be acquired, and after the widening the lots readjusted to the demands and either sold or leased for long terms. The same principle should not, however, be employed on the west side of the street, south of Saratoga street. We think conditions here are such that the widening may take place piece-meal, so to speak, somewhat after the manner employed in Philadelphia in the widening of Chestnut and other streets. And with this end in view we think that suitable legislation should be obtained from the coming session of the Legislature. We have, some time ago, forwarded to the City Solicitor a report on our investigations of this particular form of street widening, and, we believe, have collected some interesting and valuable data concerning it.

In regard to the cost for the widening of St. Paul street, we have made only a cursory estimate. We find that the blocks suggested to be purchased in entirety, and to be sold for recoupment, included within St. Paul, Saratoga, Courtland and Hamilton streets, are assessed at $368,192 on the books of the Appeal Tax Court. In all probability the purchase price for the city would be greater, but this is, of course, a matter for real estate experts.

After the street is widened, as suggested, and lot lines obliterated, the depths of the new lots would be about 100 feet. Owing to the difference of elevation in the two fronts, St. Paul and Courtland streets, each lot would have a ground floor entrance from both streets—giving, virtually, two ground floors to each building. By this arrangement of through lots of suitable widths the property would certainly be greatly enhanced in value; just how much is, of course, also a matter for the real estate expert.

We have made no estimate for the widening on the west side of St. Paul street, between Lexington and Saratoga streets; for this reason we have suggested it to be widened by the new method of establishing a widened building line.

Very respectfully,

(Signed) Jos. W. Shirley,

Chief Engineer.

Previous to the submission of the above report on the improvement of St. Paul street, the Department prepared plats, together with descriptive matter, concerning a suggestion made by Mr. Robert Lee Gill, relative to the proposed extension of Courtland street, from Franklin street to Centre street. But as this matter dealt also, to a great exent, with the improvement of St. Paul street, it will not be reproduced here in its entirety, though the following extracts are given to bring out the mutual relationship of St. Paul, Courtland and Centre streets. The extracts are as follows:

"While the proposed extension of Courtland street and the provision for a triangular park in connection with it, as indicated by Mr. Gill, appears to be an admirable suggestion, I think the question is of such importance as to deserve consideration relative to a readjustment of other streets in this immediate vicinity. By far the most important of the streets having a bearing on the extension of any north and south thoroughfare in this neighborhood is Centre street. And, in order that we may get the best results in any rearrangement of the north and south streets, a close scrutiny should be given to this important cross street.

"Centre street is at present, and there is every reason to believe that it will remain, the only east and west street between Fayette street, in the down-town section, and Madison street, in the residential section, that is at all suitable for a thoroughfare. This is due, of course, to the excessive grades on the other streets.

"Traffic is increasing all the time on Centre street, and when the Fallsway is completed we have every reason to feel that the accretions will be greater. There is a movement now on foot to widen Centre street, from St. Paul street east to Davis street, to a width of 66 feet, to correspond with the width between Howard street and St. Paul street, and a plat is now being prepared by this Department at the request of City Councilman Jefferson D. Norris for carrying out the project.

"This widening of Centre street should give immediate relief to the congested portion, but ultimately the entire length of the street should be widened to at least 80 feet, in order to accommodate the great flow of traffic that will undoubtedly use it. The demand for this is not now pressing, but it is well to consider it in relation to any proposed changes of streets intersecting Centre street. When the time for such action arrives, the widening should take place on the south side. The grade of Centre street is not so good in portions, but it is almost out of the question to better it.

"Considering again Mr. Gill's suggestion, we feel that for the present it would be an excellent move to extend Courtland street, from Franklin street to Hamilton street, about on the line he suggests. And, also, to acquire the triangular lot bounded by St. Paul, Centre, Courtland and Hamilton streets so that, in the future, when the city deems it well to rearrange the intersections of St. Paul and Centre streets, it will not need to acquire additional property.

"It might be well to mention here that the portion of Courtland street extending from Hamilton street to Centre street, over which the Gardiner Dairy Company's stable is built, is a public street and may be properly used as a thoroughfare.

"In view of the importance of both St. Paul street and Centre street as thoroughfares, we feel that the problems discussed above deserve careful consideration, and that no move should be started without due consideration towards an ultimate proper arrangement for these streets.

"In regard to the suggested ultimate widening of Centre street to 80 feet, it would be well to consider if this could be done in the same way as was proposed for the St. Paul street widening; that is, by restricting the improvements to the proposed widening zone."

Saratoga Street Extension, Easterly to Charles Street.

During the year a suggestion was made to the city to extend Saratoga street in a straight line from its bend at Liberty street to Charles street. This Department submitted a detailed report on the project, in which the suggestion was not recommended. But as this matter has received very little discussion from the public, it is not thought of sufficient import to reproduce the comments. The report also dealt, however, with the matter of widening Saratoga street on the north side, between Liberty and Charles streets, and we deem this of sufficient worth to reproduce the following:

"In considering the street arrangements in this section, we might add that Saratoga street, in our opinion, is the one which greatly needs improvement. Its present width is too narrow to give to it the use that its location would justify; and, as a by-word, the ten-foot sidewalk in front of the old Y. M. C. A. Building has encroachments on it to the extent of five feet.

"Saratoga street, with the exception of the building just mentioned, could be widened on the north side at comparatively little expense; that is, in comparison to the cost of the suggested extension. From Cathedral street to the lot just east of Little Sharp street the buildings all set back, and the lots are of such size and shape that the widening would certainly do them little damage, and might possibly be of advantage by giving to most of them an increased frontage on a wide, attractive traffic street.

"The old Y. M. C. A. Building is not at all suitable for the location, and it surely will not be very long before it will be replaced by an adequate, modern building. Of course, to condemn the present building, or even to condemn the ground required in case it should be razed, would be expensive, but we feel in this matter that the assessments could very properly be extended over a goodly area, and the benefits to the lots on both sides of Saratoga street would be considerable.

"It would seem, then, a wise move on the part of the city to have prepared an ordinance, on the so-called Philadelphia plan, widening Saratoga street on the north side to a good, ample width—the exact amount of which can best be determined after a detailed survey of the property has been made. More than half of the property required in such a widening can be gotten without causing damage to buildings, and it would seem well to make an effort to obtain this strip before any improvements are made. And when the plans have matured for any changes in the Y. M. C. A. Building, the portion required from this lot could then be obtained. On the whole, the improvement should not be a costly one, and we feel that it is worthy of consideration."

City Planning Exhibition.

During the past few years the subject of city planning has received wide discussion and the approval of the best authorities on civic problems. To stimulate public interest, which is most desirable, exhibitions covering most all phases of municipal improvements have been held in several cities. Baltimore exhibited in Philadelphia and New York; and, although our displays were far from elaborate, and were gotten up under rather trying conditions at very little expense, they nevertheless attracted quite a good bit of attention from outsiders. Especially was this the case in New York, where the exhibition was under the joint auspices of the Board of Estimates and Apportionment and the Merchants' Association. Not only has the American City Bureau, which directed the exhibition, requested the material for a collection to be exhibited in many cities of the country, but several municipal magazines have reproduced the pictures and have published articles bearing on them. This is all very desirable notoriety.

The movement inaugurated during the year to have a permanent exhibition from the city departments is certainly a good one; and, for one, the Survey will certainly do all within its means to accomplish creditable results, and we feel that the coming year will see the movement well started.

Blue Print Sub-Department.

This Department has proven one of steadily-increasing value to the city, for each year it has been kept busier, with the result, of course, that more work has been turned out; and this, too, at rates greatly below those charged by private enterprises in the city. The result has been that the amount of $4,137.52 was collected from the departments and put in the city treasury. The rates charged were: Blue prints, 1½ cents per square foot; white prints, 2 cents per square foot; negatives, 3 cents per square foot; blue print linen, 6 cents per square foot.

At the end of the year, under authority from the Honorable Board of Estimates, a machine was installed for coating or sensitizing the paper to be used for prints. When one stops to consider that the Department will, in all probability, use between three and four tons of paper during the coming year, and that our estimate in saving is, as near as we can figure it, between 25 per cent. and 40 per cent. over the method of purchasing paper from outsiders, it can then be seen that the investment should certainly prove one of spending to save.

In closing, I wish to state that the entire operations of the Department during the past year have been run most satisfactorily and we shall begin the new year in fine shape to meet what may be demanded of us. The revision of the topographical map of the city, which is now much out of date in sections, is a special feature for 1914. But this is a project—and quite a large one, too—in a class by itself, and our arrangements are such that this work will be carried out with no relationship to the routine work of the Department.

In conclusion, I wish to express my appreciation for the earnest and faithful performance of their duties of all associated with this Department.

Very respectfully,

Jos. W. Shirley,
Chief Engineer.

COMPLIMENTS

EZRA B. WHITMAN

PRESIDENT WATER BOARD
AND WATER ENGINEER

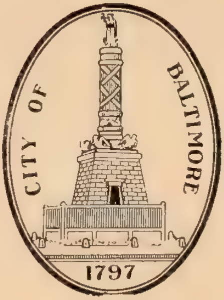
ANNUAL REPORT OF THE
WATER BOARD

TO THE

MAYOR AND CITY COUNCIL OF BALTIMORE

FOR THE FISCAL YEAR ENDING DECEMBER 31

1913



REPORT OF WATER BOARD
1913

Baltimore, January 1, 1914.

To the Honorable the Mayor and City Council of Baltimore.

Gentlemen—In compliance with the requirements of the City Charter, we beg herewith to submit for your consideration our report for the year 1913.

There were for the year two appropriations from the Water Department receipts, consisting of a salary appropriation of $106,920, and expense appropriation of $536,770, which was increased by $1,916.11 received for sales of old materials.

There were five appropriations from the tax levy: one of $93,000 for work in advance of improved paving (the Board of Estimates authorized this to be exceeded by $55,000 to be taken from the 1914 appropriation), one of $10,500 for Auxiliary Pumping Station, Lake Ashburton; one of $15,000 for cleaning mains in advance of filtration; one of $5,000 for pitometer survey for underground leaks, and one of $31,700 for repairs to pumping stations.

There were five appropriations from the 1958 Loan of $5,000,000: one of $75,860 for salaries for the Gunpowder Supply Improvement Division, one of $37,900 for salaries for the Filtration Division, one of $2,497,000 for the extension of the water system under the Act, one of $5,048.43 for construction of reservoir (balance from 1912), and one of $112,059.97 for new pumps, etc., Mount Royal Pumping Station (brought forward from 1912).

The appropriations and expenditures from them were as follows:

Expense (Department Receipts).

Appropriation	$536,770 00
Sales of old materials, etc	1,916 11
	$538,686 11
Expenditures	538,394 16
Balance	$291 95

Salaries (Department Receipts).

Appropriation	$106,920 00
Expenditures	101,293 47
Balance	$5,626 53

Work in Advance of Improved Paving (Tax Levy).

Appropriation	$93,000 00
Expenditures	147,832 01
Debit to be carried to 1914	$54,832 01

Auxiliary Pumping Station, Lake Ashburton (Tax Levy).

Appropriation	$10,500 00
Expenditures	....

Cleaning Mains in Advance of Filtration (Tax Levy).

Appropriation	$15,000 00
Expenditures	401 47
Balance	$14,598 53

Pitometer Survey (Tax Levy).

Appropriation	$5,000 00
Expenditures	5,000 00

Repairing Pumping Stations (Tax Levy).

Appropriation	$31,700 00
Expenditures	3,977 89
Balance	$27,722 11

Gunpowder Supply Improvement Division Salaries (1958 Loan).

Appropriation	$75,860 00
Expenditures	48,918 45
Balance	$26,941 55

Filtration Division Salaries (1958 Loan).

Appropriation	$37,900 00
Expenditures	21,145 16
Balance	$16,754 84

Extension of Water System Under the Act (1958 Loan).

Appropriation	$2,497,000 00
Expenditures	817,309 84
Balance	$1,679,690 16

CONSTRUCTION OF RESERVOIR (1958 Loan).

Appropriation	$5,048 43
Expenditures	....

NEW PUMPS, MT. ROYAL PUMPING STATION (1958 Loan).

Appropriation	$112,059 97
Expenditures	81,447 21
Balance	$30,612 76

The balances from the appropriations taken from the Department receipts are returned to the general treasury. The balances from the tax levy are carried over into the year 1914 for completing the work for which the appropriations were made.

The unexpended balances from the 1958 Loan revert to the loan funds and will be applied to the completion of the work already started and the future appropriation for general improvements of the water supply.

The total receipts of the Department and the disbursements are shown on the following tables:

RECEIPTS.

Amount received from water rents	$831,553 82	
Less returned	3,958 43	
		$827.595 39
Meter rents		569,669 69
Plumbing bills		72,492 41
Meter plumbing bills		7,099 52
Interest		1,899 89
Turn-offs		280 50
Vacancies		513 00
Sales of old materials, rents, etc		9,494 25
		$1.489.044 65

DISBURSEMENTS.

Water Engineer's Department:		
Expenses	$535,205 46	
Meters	1.272 59	
Salaries	101.293 47	
Collector of Water Rents and Licenses:		
Expenses	$2,034 43	
Interest	415,000 00	
Salaries	29,836 67	
Sinking funds	21,614 43	
		1.106,257 05
This shows an apparent surplus to be turned into the City Treasury of		$382.787 60

This, however, is not a true surplus of the receipts of the Department over the expenses of the city government in maintaining the Water Department, as there was $155,200 taken from the tax levy for work in advance of improved paving, for building auxiliary pumping station at Lake Ashburton, for cleaning mains in advance of filtration, for the work of the pitometer survey for underground leaks, and for repairs to the old pumps. There was also $184,534.01 taken from the tax receipts in order to pay the interest and the sinking funds of the 1916, 1922, 1926, 1943 and 1958 Loans made by the city for the improvement of the water supply.

The difference between the surplus above given and the money taken from the tax levy leaves a real surplus of $43,053.59. This is the actual amount of money received by the city from the revenues of the Water Department over and above all the expenses to which the city has been put in maintaining the Water Department.

In 1912 this surplus was $129,870.52, the decrease being due to more extensive work that was done during 1913 and paid for from the tax levy than was the case in 1912. Attention is again called to the fact that this surplus at the present time will probably be greatly reduced or entirely eliminated by the cost of operating the Filtration Plant after this is built and placed in operation.

As was the case during 1912, the general expenses of maintaining the Water Department during 1913 were much higher than would ordinarily be the case, owing to the amount of work being done in the city by the Paving Commission and the Sewerage Commission. Although there was a special appropriation to cover the work done in advance of improved paving there was a great deal of incidental work done by the Water Department in connection with the paving which is not charged to the appropriation. The work done by the Department for the Sewerage Commission and the sewerage contractors has also been very extensive and shows in the receipts of the Department under the heading of "Plumbing Bills," which this year amounted to $72,402.41, while in 1910 these plumbing bills amounted to only $42,067.01, and in 1912 to $51,010.76.

The exact amount of money spent from the 1958 Loan up to December 31, 1913, is shown in the following table:

Purchase of land		$369.543 71
Furniture and fixtures		1,187 04
Rent		5,056 51
Expert service		34.928 98
Inspection		832 07
Road No. 1		19.491 58
Sluice gates		3,246 00
Auto supplies		6,941 32
Work done on new dam		310,812 53
Work done on railroad		10,000 00
Legal service		750 00
Pay rolls		189.302 26
Board		2,892 52
Filters, basins and grading		58,346 78
Supplies for survey corps		5,633 16
Lumber and mill work		7,512 64
Employees and expenses		3.524 70
Freight and hauling		2.261 16
Drawing materials and surveying instruments		6.700 38
Castings		1,267 32
Moving Brodie House		1.164 40
Valves		1.320 00
Work at Montebello		7,781 52
Extra work		594 90
Bridge No. 1		49.292 00
Bridge No. 2		18,070 59
Filtered water reservoirs		92,042 37
Steel pipe conduit		138,019 85
Railroad, etc.		1.116 57
Head-house pump station		13.223 34
Cast-iron pipe, etc.		4.089 39
Right-of-way		4,813 24
Relaying and laying tracks		3,342 61
Disbursements from stock		49.912 89
Incidentals		46.781 90
Venturi meter tube		4.320 00
Use of locomotive		3,235 02
Treasurer of Baltimore County		20.000 00
Salaries, Gunpowder Supply Improvement Division		48.918 45
Salaries, Filtration Division		21.145 16
		$1.569.414 86
Lime, etc.	$18,720 28	
Harford Run mains	7,837 00	
Seventh Street Main	38,350 86	
New pumps, etc., Mt. Royal Pumping Station	169.387 24	
Completion of Lake Ashburton	175.401 97	
Concrete pipes	1,776 00	
		411.473 35
		$1.980,888 21

The work under the charge of the various divisions of the Water Department for the year 1913 is outlined in the following pages:

ENGINEERING DIVISION

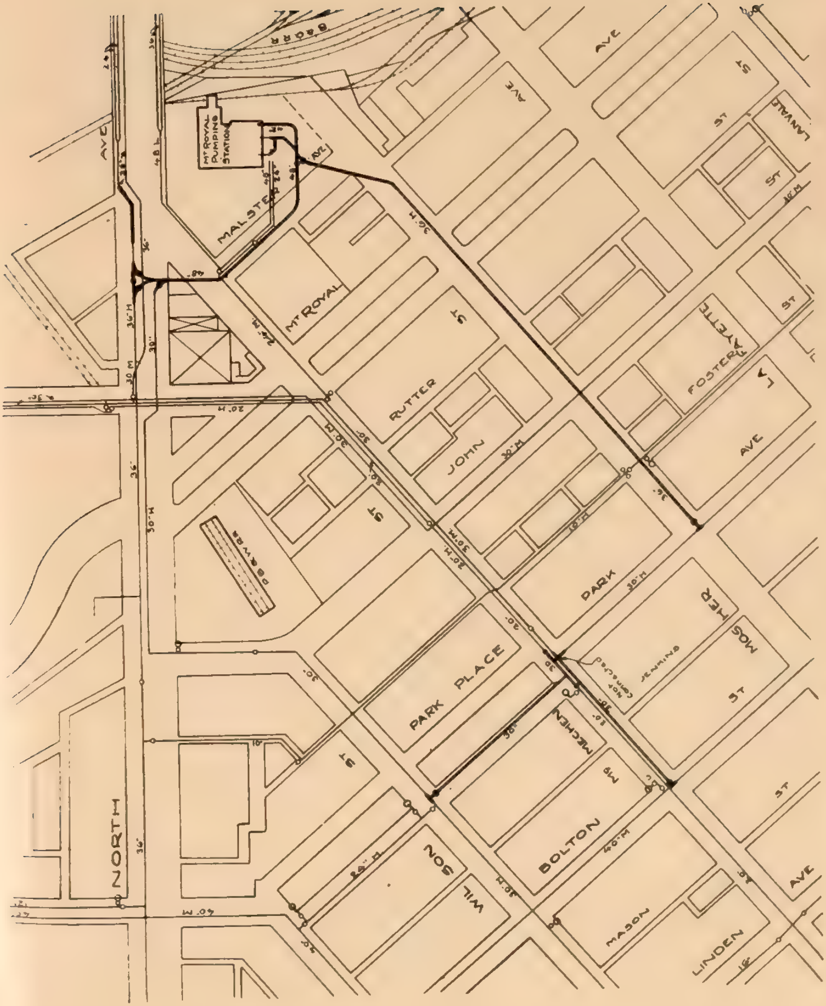
During the year this Division carried out its usual work of preparing plans for all work done by the Construction and Mechanical Divisions, preparing plans and specifications and supervising work done for the Department by contractors and making usual tests and inspections.

The plans for mains included 90,812 feet of mains, varying in size from four inches in diameter to 48 inches in diameter, which is a total of approximately 17 2-10 miles. This is an increase of approximately 33 per cent. over the amount of main laid during the year 1912. The largest of the mains that were laid was the 48-inch Middle Service main in Ensor street, which was started in 1912 and completed in 1913. Another important change was in connection with the discharge mains from the Mount Royal Pumping Station. This work is being done in connection with the new pump installed in this station and will make it possible to pump water from this station either through North avenue, as originally connected, or by a system of mains leading from the pumping station by means of a 36-inch main in Malster avenue and Mosher street, where a connection was made to a 36-inch main at Mosher street and Park avenue. The old discharge line connecting to the mains in North avenue is also being relaid. Owing to the heavy demand for water on the High Service, it was not deemed advisable to make this change during the summer months. The work on this new discharge main was begun on September 1, and is now well under way.

The location of the new discharge mains leading from Mount Royal Pumping Station and the old ones are shown on the accompanying plans.

The work of installing the new pumping engine, boilers, etc., at the Mount Royal Pumping Station has been entirely completed by the Bethlehem Steel Company as provided for in their contract of August 31, 1911. This contract provided for furnishing, delivering and erecting complete, one thirty-million-gallon vertical triple expansion pumping engine, two batteries of two boilers each, the necessary steam piping for engines and boilers, and economizers for heating the feed water

Upon the completion of the Filtration Plant this engine will pump against a head of one hundred and sixty feet. To meet the present working conditions which requires the pumping of the water from the Low Service Reservoirs to the High Service Reservoirs against a net


MT ROYAL PUMPING STATION
B & O R R
MALSTER AVE
MT ROYAL AVE
RUTTER ST
JOHN ST
PARK AVE
PARK PLACE
MECHEN ST
BOLTON ST
WILSON ST
MASON ST
LINDEN AVE
NORTH AVE
LANVALE ST
LAFAYETTE AVE
FOSTER ST
MOSHER ST
RESERVOIR
Not connected
JENNINGS
30" M
36" M
40" M
20" M
24" M
48"
36"
30"
16"

WATER MAINS IN VICINITY OF MT. ROYAL PUMPING STATION

NOTE: HEAVY LINES DENOTE MAINS INSTALLED IN CONNECTION WITH NEW PUMPING ENGINE head of two hundred and twelve feet, there have been provided three additional plungers of such area that when the engine is working at its rated speed the work performed, as expressed in horsepower, will equal the work performed under the ultimate conditions of pumping thirty million gallons against a head of one hundred and sixty feet. Therefore, the pump as it is now operating against a higher head has a capacity of only twenty-two and one-half million gallons in twenty-four hours. Upon the completion of the Filtration Plant, when the water will be directed to the pumping stations at about the same elevation as the Middle Service, instead of from the Low Service, as at the present time, the plungers now being used will be changed to larger ones and then the capacity of the engine will be the thirty million gallons called for in the contract.

The specifications require that "The engine shall perform a duty of not less than one hundred and seventy-three million foot pounds for each one thousand pounds of commercially dry steam used by the engine and any auxiliary pumps supplied by the contractor and operated during the duty trial. Steam containing less than 1½ per cent. of entrained water, as determined by calorimeter measurements, shall be considered as commercially dry steam. In computing the duty, the work performed by the engine shall be based upon plunger displacement. The head for computing the duty shall be that shown by accurate pressure gauges attached to the suction and discharge mains at a point inside the engine-room. No allowance shall be made for friction of water in pumps or pipes between the gauges attached to the suction and discharge mains. In computing the duty, the total steam used, including that used by jackets, reheaters and auxiliary pumps, shall be charged to the engine. The duty trial shall be not less than twelve hours or more than twenty-four hours."

Tests for the capacity and duty of the engine were conducted jointly by the Engineering Division of the Water Department and a representative of the contractor, and the result of these tests are given in the following tabulations:

MT. ROYAL PUMPING STATION.

Twelve-Hour Duty Trial on Triple Expansion High Duty Vertical Pump No. 10, Manufactured by the Bethlehem Steel Company—Sept. 18, 1918.

Dimensions and Proportions.

High pressure cylinder:

Diameter of piston	28 inches.
Diameter of piston rod	6 inches.
Length of stroke	60 inches
Area, head end	615.754 sq. ins.
Net area, crank end	587.480 sq. ins.
Clearance, head end	434.87 cu. ins. (1.177 per cent)
Clearance, crank end	394.80 cu. ins. (1.120 per cent)

Intermediate cylinder:

Diameter of piston	54 inches.
Diameter of piston rod	6 inches.
Length of stroke	60 inches.
Area of head end	2,290.226 sq. ins.
Net area, crank end	2,261.952 sq. ins.
Clearance, head end	1,283.11 cu. ins. (0.934 per cent.)
Clearance, crank end	1,243.00 cu. ins. (0.916 per cent.)

Low pressure cylinder:

Diameter of piston	82 inches.
Diameter of piston rod	7 inches.
Length of stroke	60 inches.
Area of head end	5,281.030 sq.ins.
Net area, crank end	5,242.545 sq. ins.
Clearance, head end	846.14 cu. ins. (0.267 per cent.)
Clearance, crank end	788.93 cu. ins. (0.251 per cent.)

Water cylinders:

Diameter of plungers for 23,092,560 gallons per day	32⅜ inches.
Area of plunger	823.210 sq. ins.
Displacement, per cylinder per stroke	28.584 cu. ft.
Displacement, three cylinders of pump per stroke	85.752 cu. ft.
Capacity in gallons for 24 hours (212 ft. head)	23,092,560 U. S. gals.
Diameter of suction pipe	42 inches.
Diameter of discharge pipe	42 inches.
Type of condenser	Surface
Location of condenser	In suction pipe.

1.	Duration of test, from 10 A. M. to 10 P. M.	12 hours.
2.	Total number of strokes per engine	17,825

Average Pressures.

3.	Steam pressure at throttle	176.27 lbs. per sq. in.
4.	Steam pressure in first receiver	35.57 lbs. per sq. in.
5.	Steam pressure in second receiver	13.80 lbs. per sq. in. (absolute).
6.	Vacuum in inches of mercury, condenser	26.98 inches of mercury.
7.	Pressure, suction water	11.87 lbs. per sq. in.
8.	Pressure, discharge water	104.26 lbs. per sq. in.
9.	Pressure, net discharge	92.39 lbs. per sq. in.
10.	Net head, in feet	213.54 ft.

Average Temperatures.

11.	Steam at throttle	439.29° F.
12.	Steam, first receiver	285.80° F.
13.	Steam, second receiver	210.80° F.
14.	Condensed steam, air pump discharge, condenser	75.00° F.
15.	Condensed steam, L. P. jacket drain	86.60° F.
16.	Condensed steam, second receiver	86.70° F.
17.	Suction water	71.70° F.
18.	Degrees of superheat at throttle	61.29° F.

Steam Consumption.

19.	Total weight of condensed steam from air pump discharge	95,615.5 lbs.
20.	Total weight of condensed steam from jacket drains	12,308.0 lbs.
21.	Total steam supplied to pump	107,923.5 lbs.

Fuel.

22.	Total weight of coal fired	13.214.0 lbs.
23.	Average speed in R. P. M	24.757

Horsepower.

24.	I. H. P., H. P., head end	166.865 H. P.
25.	I. H. P., H. P., crank end	186.416 H. P.
26.	I. H. P., I. P., head end	119.866 H. P.
27.	I. H. P., I. P., crank end	123.922 H. P.
28.	I. H. P., L. P., head end	163.875 H. P.
29.	I. H. P., L. P., crank end	157.969 H. P.
30.	Total I. H. P	918.913 H. P.
31.	Indicated W. H. P., H. P., water chamber	298.287 H. P.
32.	Indicated W. H. P., I. P., water chamber	297.489 H. P.
33.	Indicated W. H. P., L. P., water chamber	294.867 H. P.
34.	Total indicated W. H. P	890.643 H. P.
35.	Developed W. H. P., from weight and head	855.882 H. P.

Duty per 1,000 Pounds Steam, on Plunger Displacement.

36.	First hour of trial, 10 A. M. to 11 A. M.	189,250,000.0 ft. lbs.
37.	Second hour of trial, 11 A. M. to 12 M	183,702,500.0 ft. lbs.
38.	Third hour of trial, 12 M. to 1 P. M	190,030,000.0 ft. lbs.
39.	Fourth hour of trial, 1 P. M. to 2 P. M	191,777,500.0 ft. lbs.
40.	Fifth hour of trial, 2 P. M. to 3 P. M.	186,638,700.0 ft. lbs.
41.	Sixth hour of trial, 3 P. M. to 4 P. M.	179,237,600.0 ft. lbs.
42.	Seventh hour of trial, 4 P. M. to 5 P. M.	194,274,600.0 ft. lbs.
43.	Eighth hour of trial, 5 P. M. to 6 P. M.	189,053,000.0 ft. lbs.
44.	Ninth hour of trial, 6 P. M. to 7 P. M.	190,347,400.0 ft. lbs.
45.	Tenth hour of trial, 7 P. M. to 8 P. M	188,965,300.0 ft. lbs.
46.	Eleventh hour of trial, 8 P. M. to 9 P. M.	192,293,500.0 ft. lbs.
47.	Twelfth hour of trial, 9 P. M. to 10 P. M.	185,980,800.0 ft. lbs.
48.	Average duty during entire trial	188,427,800.0 ft. lbs.
49.	Duty per 100 lbs. of coal on plunger displacement.	153,895,500.0 ft. lbs
50.	Duty in ft. lbs. per one milion B. T. U	152,560,420.0 ft. lbs.
51.	Capacity of pump, gallons per 24 hours	22,868,000.0 gals.
52.	Steam per lb. of coal	8.167 lbs.
53.	Steam per I. H P. per hour	9.787 lbs.
54.	Steam per W. H. P. per hour	10.508 lbs.
55.	Coal per I. H. P. per hour	1.198 lbs.
56.	Coal per W. H. P. per hour	1.287 lbs.
57.	Gallons pumped per lb. of coal	865.29 gals.
58.	Ratio of expansion	26.167

Efficiencies.

59.	Efficiency of engine	96.92 per cent
60.	Thermal efficiency	19.61 per cent.
61.	Themodynamic efficiency	30.41 per cent.
62.	Efficiency of water cylinder	96.10 per cent.
63.	Combined efficiency of pump unit	93.14 per cent
64.	Combined engine and pump load	6.86 per cent.

The boilers furnished under the contract were horizontal water tube boilers and have a rated capacity of 200 horsepower each and each battery of two boilers was required by the specifications to furnish a quantity of steam at least 30 per cent. in excess of the actual requirements of the engine when working at its full load.

The boilers furnished were those manufactured by Babcock & Wilcox, and each one is provided with a superheater of the attached type, and is designed to raise the temperature of the steam at least 50 degrees Fahrenheit above the normal temperature of saturated steam at the working pressure at which the boilers are to operate, when the boilers are steaming at their full capacity.

Each boiler is equipped with mechanical stoker of the under-feed type, the stokers being furnished by the Taylor Stoker Company; this company also furnishing the appurtenances required to operate the stoker, including the blower and engines, air ducts, piping, regulating valves, etc.

These stokers are required to prevent the formation of smoke while burning bituminous coal at the rate of from 20 to 25 pounds per square foot of grate surface per hour. They are also required to burn effectually and economically sufficient coal to develop the full rated horsepower of the boilers and to force the same to 50 per cent. beyond their rated capacity if required.

A Green economizer was furnished with these boilers and it was required that the economizer shall have ample heating surface to increase the temperature of the feed water passing through it by at least 100 degrees Fahrenheit when the boilers are steaming at their full rated capacity.

The specifications require that the boilers shall be rated upon an equivalent evaporation of 34½ pounds of water per hour into dry steam from and at 212 degrees Fahrenheit, equal to one boiler horsepower. They also require that the boilers shall evaporate 10½ pounds of water per pound of coal, and be capable of carrying an overload of not less than 50 per cent.

Careful tests were made of the boilers and the following tabulations show the results of these tests.:

MT. ROYAL PUMPING STATION.

Twelve-Hour Evaporative Test on Babcock & Wilcox Water Tube Boiler No. 7481, Equipped With Taylor Gravity Underfeed Stoker—May 30, 1913. (Station Boiler No. 4.)

General Data.

Fuel	Run of mine. Orendt Vein bituminous coal
Kind of furnace	Taylor Gravity Underfeed Stoker.
Kind of draft	Forced
Method of starting and stopping test	Alternate A. S. M. E. 1899.
Method of measuring coal	Platform scales.
Method of measuring water	Platform scales.
Method of flue gas analysis	Orsat apparatus.
Date of trial	May 24, 1913.
1. Duration of trial	12 hours.

Dimensions and Proportions.

2.	Equivalent horizontal grate surface (furnace dimensions: 7 ft. 3 ins. long, 7 ft. 4 ins. wide)	53.167 sq. ft.
3.	Stoker area, exclusive of dump area (5 ft. 9 ins. long, 3 ft. 11 ins. wide)	22.521 sq. ft.
4.	Area of air opening in tuyeres	238.0 sq. ins.
5.	Ratio of tuyere opening to stoker area	13.63 :100
6.	Water heating surface	2,058.0 sq. ft.
7.	Ratio of water heating surface to stoker grate area	91.38 :1.00

Average Pressures.

8.	Steam pressure by gauge	171.96 lbs. per sq. in.
9.	Atmospheric pressure (mercurial barometer, 29.72 inches of mercury)	14.59 lbs. per sq. in.
10.	Absolute steam pressure	186.55 lbs. per sq. in.
11.	Draft pressure under grate (2.167 ins. of water)	11.146 lbs. per sq. ft.
12.	Draft pressure over fire (.0565 ins. of water)	.293 lbs. per sq. ft.
13.	Draft pressure, third pass (.107 ins. of water)	.555 lbs. per sq. ft.
14.	Draft pressure, flue breeching (.6425 ins. of water)	3.335 lbs. per sq. ft.

Average Temperatures.

15.	External air	67.0° F.
16.	Boiler room	75.3° F.
17.	Feed water at storage tank	65.7° F.
18.	Feed water entering boiler	66.2° F.
19.	Steam	453.0° F.
20.	Escaping flue gases at boiler breeching	514.0° F.

Fuel.

21.	Size	Mine run, crushed to 3 ins.
22.	Total weight of coal as fired	10,676 lbs.
23.	Percentage of moisture in coal	1.705 per cent.
24.	Total weight of dry coal as fired	10,494 lbs.
25.	Total weight of ash and refuse	1,580 lbs.
26.	Percentage of ash and refuse in dry coal	15.06 per cent.
27.	Total combustibles consumed	8,914 lbs.

Average Proximate Analysis of Coal.

28.	Volatile matter	16.15 per cent.
29.	Moisture	1.705 per cent.
30.	Ash	9.24 per cent.
31.	Fixed carbon	72.905 per cent.
		100.00 per cent.

32.	Ash in dry coal	9.40 per cent.
33.	B. T. U. per lb. of coal as fired	13,800 B. T. U.
34.	B. T. U. per lb. of dry coal	14,037 B. T. U.
35.	B. T. U. per lb. combustible	15,496 B. T. U.
36.	Sulphur (separate determination)	.80 per cent

Analysis of Ash Pit Refuse.

37.	Volatile matter	3.25 per cent.
38.	Moisture	.15 per cent.
39.	Earthy matter (chemical ash)	59.83 per cent.
40.	Fixed carbon	36.67 per cent.
		100.00 per cent.
41.	B. T. U. per lb. as received	5,540 B. T. U.
42.	B. T. U. per lb. dry refuse	5,550 B. T. U.

Computed Ultimate Analysis of Coal.

43.	Carbon	78.58 per cent.
44.	Hydrogen	4.78 per cent.
45.	Oxygen	4.73 per cent.
46.	Nitrogen	1.87 per cent.
47.	Sulphur	.80 per cent.
48.	Ash	9.24 per cent.
		100.00 per cent.

Fuel Per Hour.

49.	Dry coal per hour	874.5	lbs.
50.	Combustible per hour	742.83	lbs.
51.	Dry coal per sq. ft. equivalent grate surface per hour	16.448	lbs.
52.	Dry coal per sq. ft. stoker area per hour	38.83	lbs.
53.	Combustible per sq. ft. equivalent grate surface per hour	13.972	lbs.
54.	Combustible per sq. ft. stoker area per hour	32.96	lbs.
55.	Dry coal per sq. ft. water heating surface per hour	.4248	lbs.
56.	Combustible per sq. ft. water heating surface per hour	.3609	lbs.

Quality of Steam.

57.	Percentage of moisture in steam	0.0 per cent.
58.	Degrees of superheat (F.)	76.9°

Water.

59.	Total weight of water fed to boiler	93,390 lbs.
60.	Total water actually evaporated, corrected for quality of steam	93,390 lbs.
61.	Factor of evaporation	1.2456
62.	Equivalent water evaporated into steam from and at 212 degrees F.	116,326 lbs.

Water Per Hour.

63.	Water fed to boiler per hour	7,782.5 lbs.
64.	Water evaporated per hour, corrected for quality of steam	7,782.5 lbs.
65.	Equivalent evaporation per hour from and at 212° F.	9,693.8 lbs.
66.	Equivalent evaporation per hour from and at 212° F. per sq. ft. of water-heating surface	4.71 lbs.

Horsepower.

67. Horsepower developed (34.5 lbs. water evaporated per hour into dry steam from and at 212° F. equals one boiler horsepower) . 280.98 H. P.
68. Builders' rated horsepower .... 206.0 H. P.
69. Percentage of builders' rated horsepower developed .... 136.4 per cent.

Economic Results.

70. Water apparently evaporated under actual conditions per lb. of coal as fired .... 8.747 lbs.
71. Equivalent evaporation from and at 212° F. per lb. of coal as fired .... 10.896 lbs.
72. Equivalent evaporation from and at 212° F. per lb. of dry coal . 11.085 lbs.
73. Equivalent evaporation from and at 212° F. per lb. combustible . 13.05 lbs.

Efficiency.

74. Efficiency of stoker .... 93.80 per cent.
75. Efficiency of boiler, based on combustible .... 81.72 per cent.
76. Efficiency of boiler, including grate, based on dry coal .. 76.63 per cent.

Cost of Evaporation.

77. Cost of coal per ton of 2,240 lbs. delivered on siding at Pumping Station $2.83
78. Cost of fuel used for evaporating 1,000 lbs. of water under observed conditions $0.1429
79. Cost of fuel used for evaporating 1,000 lbs. of water from and at 212° F. $0.1147

Average Flue Gas Analysis.

80. Carbon dioxide (CO_2) .... 11.40 per cent.
81. Carbon monoxide (CO) .... 0.00 per cent.
82. Free oxygen (O_2) .... 7.05 per cent.
83. Nitrogen (N_2) .... 81.55 per cent.

100.00 per cent.

84. Dilution coefficient .... 176 per cent.
85. Per cent. excess aid above theoretical requirements ...... 76 per cent.

Heat Balance, B. T. U. Per Pound Combustible.

		B. T. U.	P. Ct.
86.	Total heat per lb. combustible	15,496	100.00
87.	Heat absorbed in evaporation and superheating	10,570	68.20
88.	Heat loss through grate with unburned combustible	855	5.52
89.	Heat loss with carbon monoxide up the stack	0	0.00
90.	Heat loss with dry flue gases	1,700	10.97
91.	Heat loss with moisture from hydrogen in the coal	583	3.76
92.	Heat loss with moisture in the coal	23	.15
93.	Heat loss with moisture in the air	94	.60
94.	Radiation, conduction, etc	1,671	10.80
			100.00

MT. ROYAL PUMPING STATION.

Four-Hour Capacity Test on Babcock & Wilcox Water Tube Boiler No. 7481, Equipped With Taylor Gravity Underfeed Stoker—May 30, 1913.

(Station Boiler No. 4.)

General Data.

	Fuel	Run of mine, Orenda Vein bituminous coal.
	Kind of furnace	Taylor Gravity Underfeed Stoker.
	Kind of draft	Forced.
	Method of starting and stopping test	Alternate A. S. M. E. 1899.
	Method of measuring coal	Platform scales.
	Method of measuring water	Platform scales.
	Method of flue gas analysis	Orsat apparatus.
	Date of trial	May 24, 1913.
1.	Duration of trial	4 hours.

Dimensions and Proportions.

2.	Equivalent horizontal grate surface (furnace dimensions: 7 ft. 3 ins. long, 7 ft. 4 ins. wide)	53.167 sq. ft.
3.	Stoker area, exclusive of dump area (5 ft. 9 ins. long, 3 ft. 11 ins. wide)	22.521 sq. ft.
4.	Area of air openings in tuyeres	238.0 sq. ins.
5.	Ratio of tuyere opening to stoker area	13.63 :100
6.	Water-heating surface	2,058.0 sq. ft.
7.	Ratio of water-heating surface to stoker grate area	91.38 :1.00

Average Pressures.

8.	Steam pressure by gauge	175.53 lbs. per sq. in.
9.	Atmospheric pressure (mercurial barometer, 29.80 inches of mercury)	14.63 lbs. per sq. in.
10.	Absolute steam pressure	190.16 lbs. per sq. in.
11.	Draft pressure under grate (3.658 ins. of water)	18.713 lbs. per sq. in.
12.	Draft pressure over fire (.0465 ins. of water)	.241 lbs. per sq. ft.
13.	Draft pressure, third pass (.167 ins. of water)	.865 lbs. per sq. ft.
14.	Draft pressure, flue breeching (.6853 ins. of water)	3.548 lbs. per sq. ft.

Average Temperatures.

15.	External air	59.5° F.
16.	Boiler room	71.5° F.
17.	Feed water at storage tank	66.1° F.
18.	Feed water entering boiler	66.2° F.
19.	Steam	473.6° F.
20.	Escaping flue gases at boiler breeching	646.2° F.

Fuel.

21.	Size	Mine run, crushed to 3 ins.
22.	Total weight of coal as fired	6,603 lbs.
23.	Percentage of moisture in coal	1.795 per cent.
24.	Total weight of dry coal as fired	6,484 lbs.
25.	Total weight of ash and refuse	882 lbs.
26.	Percentage of ash and refuse in dry coal	13.6 per cent.
27.	Total combustibles consumed	5,602 lbs.

Average Proximate Analysis of Coal.

28.	Volatile matter	16.105	per cent.
29.	Moisture	1.795	per cent.
30.	Ash	8.515	per cent.
31.	Fixed carbon	73.585	per cent.
		100.00	per cent.
32.	Ash in dry coal	8.71	per cent.
33.	B. T. U. per lb. of coal as fired	13,880	B. T. U.
34.	B. T. U. per lb. of dry coal	14,138	B. T. U.
35.	B. T. U. per lb. combustible	15,475	B. T. U.
36.	Sulphur (separate determination)	0.935	per cent.

Analysis of Ash Pit Refuse.

37.	Volatile matter	3.44	per cent.
38.	Moisture	.31	per cent.
39.	Earthy matter (chemical ash)	63.23	per cent.
40.	Fixed carbon	33.02	per cent.
		100.00	per cent.
41.	B. T. U. per lb. as received	9,188	B. T. U.
42.	B. T. U. per lb. dry refuse	9,216	B. T. U.

Computed Ultimate Analysis of Coal.

43.	Carbon	79.00	per cent.
44.	Hydrogen	4.85	per cent.
45.	Oxygen	4.82	per cent.
46.	Nitrogen	1.88	per cent.
47.	Sulphur	.935	per cent.
48.	Ash	8.515	per cent.
		100.00	per cent.

Fuel Per Hour.

49.	Dry coal per hour	1,621.00	lbs.
50.	Combustible per hour	1,400.50	lbs.
51.	Dry coal per sq. ft. equivalent grate surface per hour	30.49	lbs.
52.	Dry coal per sq. ft. stoker area per hour	71.98	lbs.
53.	Combustible per sq. ft. equivalent grate surface per hour	26.34	lbs.
54.	Combustible per sq. ft. stoker area per hour	62.19	lbs.
55.	Dry coal per sq. ft. water-heating surface per hour	.7876	lbs.
56.	Combustible per sq. ft. water-heating surface per hour	.6805	lbs.

Quality of Steam.

57.	Percentage of moisture in steam	0.0	per cent.
58.	Degrees of superheat (F.)	96.0	

Water.

59. Total weight of water fed to boiler......................47,849 lbs.
60. Total water actually evaporated, corrected for quality of steam..47,849 lbs.
61. Factor of evaporation....................................1.2566
62. Equivalent water evaporated into steam from and at 212° F..60,127 lbs.

Water Per Hour.

63. Water fed to boiler per hour..........................11,962.3 lbs.
64. Water evaporated per hour, corrected for quality of steam..11,962.3 lbs.
65. Equivalent evaporation per hour from and at 212° F......15,031.8 lbs.
66. Equivalent evaporation per hour from and at 212° F. per sq, ft. of water-heating surface ....7.31 lbs.

Horsepower.

67. Horsepower developed (34.5 lbs. water evaporated per hour into dry steam from and at 212° F. equals one boiler horsepower)..435.7 H. P.
68. Builders' rated horsepower..............................206.0 H. P.
69. Percentage of builders' rated horsepower developed......211.5 per cent.

Economic Results.

70. Water apparently evaporated under actual conditions per lb. of coal as fired ....7.247 lbs.
71. Equivalent evaporation from and at 212° F. per lb of coal as fired ....9.106 lbs.
72. Equivalent evaporation from and at 212° F. per lb. of dry coal.9.273 lbs.
73. Equivalent evaporation from and at 212° F. per lb. combustible.10.73 lbs.

Efficiency.

74. Efficiency of stoker.................................83.00 per cent.
75. Efficiency of boiler, based on combustible.............67.28 per cent.
76. Efficiency of boiler, including grate, based on dry coal...63.65 per cent.

Cost of Evaporation.

77. Cost of coal per ton of 2,240 lbs. delivered on siding at Pumping Station $2.83
78. Cost of fuel used for evaporating 1,000 lbs. of water under observed conditions $0.1743
79. Cost of fuel for evaporating 1,000 lbs. of water from and at 212° F. $0.1387

Fuel Economizer Results.

80. Rise in temperature of feed water through fuel economizer....119° F.

Average Flue Gas Analysis.

81. Carbon dioxide (CO_2)............................. 12.488 per cent.
82. Carbon monoxide (CO)............................. 0.0 per cent.
83. Free oxygen (O_2)................................. 5.475 per cent.
84. Nitrogen (N_2) .... 82.037 per cent.

100.00 per cent.

85. Dilution coefficient ....156 per cent.
86. Per cent. excess air above theoretical requirements....... 56 per cent.

Heat Balance, B. T. U. Per Pound Combustible.

		B. T. U.	P. Ct.
87.	Total heat per lb. combustible	15,475	100.00
88.	Heat absorbed in evaporation and superheating	8,850	57.00
89.	Heat loss through grate with unburned combustible	2,360	15.20
90.	Heat loss of carbon monoxide up the stack	0	0.00
91.	Heat loss with dry flue gases	2,073	13.40
92.	Heat loss with moisture from hydrogen in coal	595	3.80
93.	Heat loss with moisture in the coal	25	.16
94.	Heat loss with moisture in the air	47	.30
95.	Radiation, conduction, etc	1,525	10.14
			100.00

Both the engine and the boilers more than met the requirements of the specifications, as is shown more clearly in the report of Mr. Robert L. Clemmitt of the Engineering Division, and were accepted by the Board.

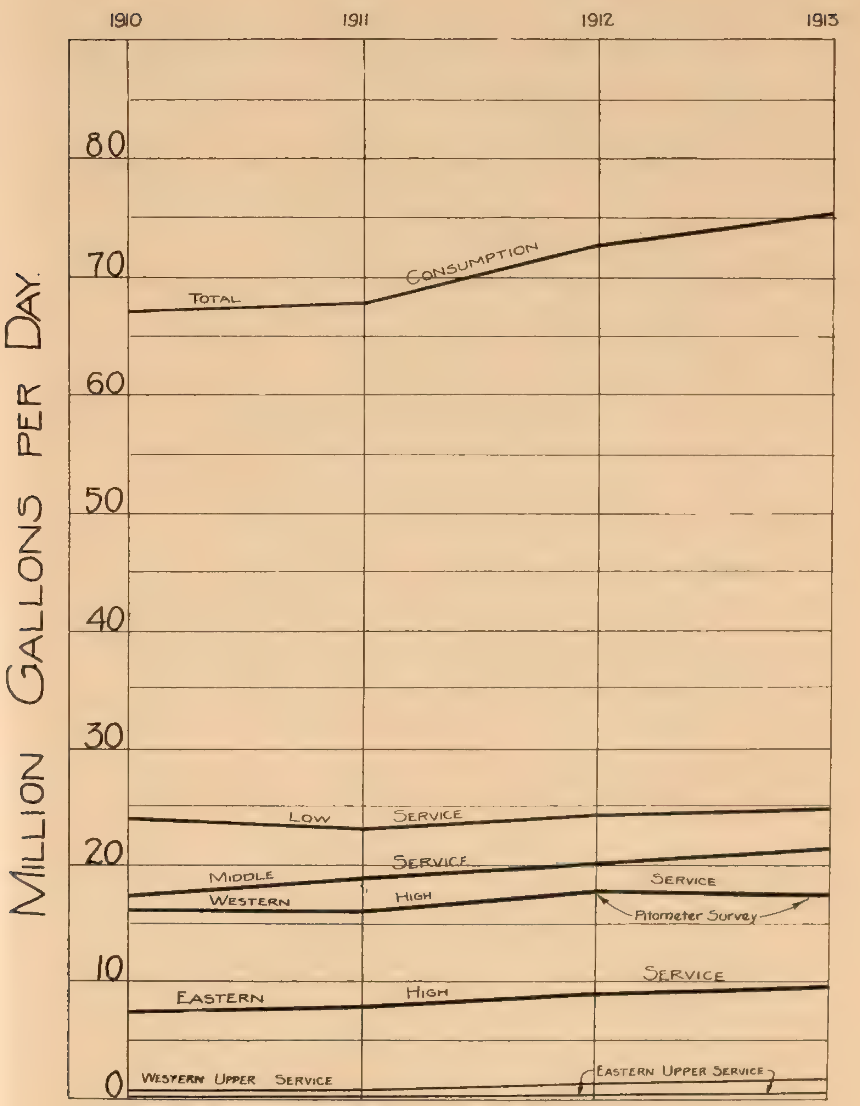
At the beginning of the year a survey was organized to ascertain by pitometer measurement the amount of underground leakage existing on mains and service pipes in the streets and on plumbing fixtures inside of the houses.

A description of the methods, results, costs and materials required for doing this work is given in the report of the Engineering Division.

Most of the work was carried out in the Western High Service District. The water consumption in this district was lower in this service than it was last year, although the Sewerage Commission has done a great deal of work in the Western High Service District and has used a considerable amount of water in construction, in puddling of trenches and for flushing the sewers when the construction was completed. All the other services showed a considerable increase over the water consumption for the year 1912, the Western High Service being the only one that shows a decrease.

The accompanying diagram shows the consumption of water on the different services and how these services increased with the exception of the Western High Service.

CONSUMPTION BY YEARS.



The survey in the district showed that the defective house fixtures are responsible for about 60 per cent. of the total leakage, and that broken supply pipes were responsible for about 20 per cent., while leaks from mains and valves in the street construction were responsible for the remaining 20 per cent. When this work is carried into the older part of the city with its older mains and service pipes, it is expected that the percentage of leakage on the mains and service pipes will be very much higher than in the newer section of the city, which was first examined.

The Pitometer Survey organization also carried out the work of cleaning the water mains that was done during the year. No attempt was made to do the cleaning by the use of any patent apparatus or methods, but it has been done by a method of flushing in alternate directions developed in this Department. While the cleaning of mains by this method is probably not as thorough as when a mechanical scraper is pulled through the mains, there is no question but that a great majority of the mud and dirt deposited in the mains can be removed by this method, especially on the smaller sizes of mains, and the cost is very small compared to other methods. The Department cleaned 40 31-100 miles of mains by this method at a total cost of $577.80.

CONSTRUCTION DIVISION

This Division has been engaged during the year in its usual work in the construction and repairs of all mains and piping owned and controlled by the Water Board, the connections thereto, the installation of house services, meters, fire hydrants, fountains and blowoffs.

This Division has had one of the busiest years in its history.

The following table shows how the work has increased during the past four years:

EXTENT AND CHARACTER OF INSTALLATION BY WATER DEPARTMENT.

Nature of Work.	Years.			
	1910.	1911.	1912.	1913.
Extension of mains:				
Length	67,886	87,808	68,824	97,293
Sizes	4″ to 48″	2″ to 30″	3″ to 16″	3″ to 48″
Cost	$128,908.37	$149,339.85	$81,220.07	$198,794.52
Flat rate services:				
Number	2,410	2,784	2,982	3,256
Cost	$22,466.66	$26,722.41	$29,590.86	$35,558.52
Meter services installed:				
Number	114	81	324	217
Sizes	⅝″ to 6″	⅝″ to 6″	⅝″ to 6″	⅝″ to 6″
Cost	$7,871.86	$6,822.41	$16,941.44	$15,012.79
Fire hydrants installed:				
Number	74	46	166	276
Cost	$6,910.13	$4,021.87	$13,125.07	$19,805.40
Repairing and changing mains:				
Cost	29,356.11	45,857.97	28,435.86	49,099.22
Repairing and transferring services:				
Cost	44,050.72	43,689.97	56,136.48	48,839.41
Repairing meters:				
Cost	10,057.97	5,968.17	7,463.59	7,862.60
Plumbing work:				
Cost	25,811.93	25,142.15	39,052.96	55,505.11

Much of this increased work has been due to the laying of mains and the changing of house services in advance of improved paving laid by the Paving Commission, Commissioners for Opening Streets and the State Roads Commission. A considerable amount of work has also been done for the Sewerage Commission. Owing to the fact that sewers cannot be laid with changes or breaks in the line or grade, wherever the water mains or house services are in the way of sewer construction, it is necessary to move them.

This Division has also made 575 taps to the mains for the purpose of carrying water to the flushing manholes at the upper or dead ends of the sewers. It has also had charge of the laying of the 30-inch, 36-inch and 48-inch pipe connections around the Mount Royal Pumping Station in connection with the installation of the new thirty-million-gallon pump at this station.

Owing to the large amount of contract work being carried on in the city by the Sewerage Commission, the Commissioners for Opening Streets, the Paving Commission and the State Roads Commission, it was very difficult to secure enough labor to carry out the work of this Division, and the efficiency of the labor which was available was not as high as it has been, which is shown in the increased cost of laying mains throughout the year.

MECHANICAL DIVISION

The work of the Mechanical Division includes the care and operation of the three pumping stations of the Water Department and of the machine shop at the Gay Street Yard, where all the fire hydrants used in the Department are made, as are also the gate valves up to sixteen inches in diameter.

At the Mount Royal Pumping Station, the new pumping engine and the boilers were turned over to the Mechanical Division after they had been tested and accepted by the Engineering Division. This new pump has been running very satisfactorily since it was placed in operation, but has not been run up to its full speed, owing to the construction work on the mains outside of the station.

A change was made in the organization of the operating forces at the pumping stations at the beginning of the year and the engineer on the day watch at each station was given the title of Engineer-in-Charge and is held responsible for not only what happens during his watch, but during the watches of the other engineers.

This placing of responsibility on one man has worked admirably and has relieved the Superintendent of the Mechanical Division of a great deal of routine work which otherwise fell upon him to do.

At the Mount Royal Pumping Station, most of the auxiliary machinery in the station has been overhauled, and when one of the 17,500,000 pumping units broke a piston in October, this pump was dismantled for the purpose of giving it a thorough overhauling.

At the Eastern Pumping Station, either one or both of the pumps have been in continuous operation throughout the entire year, with the exception of a period of approximately eight hours. A considerable amount of work has been done toward putting the two pumps at this station in better condition. This was done, however, without shutting down the plant and at the same time without dismantling either pump to such an extent that it could not have been put back into service within eight or nine hours in case of an emergency.

Owing to the fact that it had been necessary to keep the pumps at the Eastern Pumping Station in almost continuous operation while the piping around the Mount Royal Pumping Station was being changed in connection with the installation of the new pump, there had been little or no opportunity to make the proper repairs on the two pumps at the Eastern Pumping Station. Upon the completion of the installation of the new pump and starting it in regular operation, opportunity was found for making repairs to the two pumps at the Eastern Pumping Station.

One of these pumps, No. 1207, was found to have a slip of 32.7 per cent. The valves on this pump were all overhauled and the straight port seats in the pump were either renewed or faced off and put in first-class condition and practically all the hard rubber valves were renewed. This reduced the slip to 9 per cent., although in a short time it had increased again to 11.5 per cent. About the middle of August, Boyd turbine valves were bought and these were gradually installed to take the place of the straight port valves. With six of the eight decks equipped with the turbine valves, the slip was reduced to 3 per cent. Five weeks' run in this condition, however, had increased the slip to 7.4 per cent. The replacing of the two decks of straight port seats with turbine valves again reduced the slip to 4.8 per cent., and after running for about six weeks this slip had increased to 5.7 per cent.

It will be noted from the above, with the old straight port seats in the best of condition, the slip was 9 per cent., and in 10 days it had increased to 11.5 per cent., while with the turbine valves the slip was 4.8 per cent., and in four weeks' time the slip had increased only 0.9 per cent.

Another advantage noticed in the use of the turbine valves is that although the pump has operated 127 days of 24 hours each, there have been no broken turbine valves or valve springs, while with the straight port seats, broken valves and valve springs frequently made it necessary to stop the operations of the pumps to replace the broken parts.

The second pump at the Eastern Pumping Station, No. 839, was also in very poor condition, and the slip had increased to 24.4 per cent. before it could be put out of service for the thorough overhauling it needed. The valve seats were overhauled and as the straight port valves were taken from Pump No. 1207 they were placed in Pump No. 839. This overhauling of Pump No. 839 brought the slip down to 8 per cent. In three weeks' time this slip had increased to 10 per cent.

The use of the turbine valves has been justified by the results obtained and the points in favor of the turbine valves over the straight port valves are as follows:

First—The reduction in the slip of the pump below that which is possible to obtain with the straight port seats. The lowest slip obtained with the straight port seats in absolutely first-class condition was about 8 per cent., while the lowest slip obtained with the turbine valves was 3 per cent.

Second—The continued good results obtained by the turbine valves over a period of time; that is, the slip of the pump increases much more rapidly with the straight port seats than it does with the turbine valves.

Third—The valves and springs with the turbine valves do not receive the jar and shock which they get with the straight port seats, and they, therefore, do not break with the frequency which they do with the straight port seats. This is a very considerable advantage, as it becomes necessary to shut down the pump and open up the water end and replace the broken parts whenever a valve or valve spring is broken.

Fourth—The operation of the water end of the pump has been very much quieter with the turbine valves in use than it was with the straight port seats in use. This reduces the shock on the valve deck due to the slamming of the valves.

Fifth—The rotation of the turbine valves keeps the valve seats in good condition, free from the radial cuts which appear in the straight port valves which open and close without rotation, always dropping back in their initial position.

The full details of these tests are given in the accompanying report of the Superintendent of the Mechanical Division:

"Just prior to June 12, 1913, all of the straight port seats in Pump No. 1207 were either renewed or faced off and put in prime condition, at the same time practically all the hard rubber valves were renewed. During the process of overhauling the valves and valve seats, which took considerable time because the pump could not be dismantled and had to be left in such shape, so that it would take only a couple of hours to place it in condition ready for service, in case of break down on Pump No. 839. The justification of this procedure was borne out a number of times. Due to the intermittent use of Pump No. 1207, and from June 12, 1913, back to February 26, 1913, no slip test was made. On the latter date this had reached the amount of 32.7 per cent.

"The consumption of steam by the pump on June 12, 1913, and on the basis of water horsepower at discharge, and pumping at the rate 10,937,000 per day was 22½ pounds per water horsepower, this with the by-pass closed between the high pressure and intermediate pressure cylinders. On the same day with a delivery by pump displacement at the rate of 13,440,000 per day and by pitometer 11,219,000, the steam consumption was per water horsepower 24 1-10 pounds; this with the by-pass open between the high pressure and intermediate pressure cylinders, to obtain the requisite speed. During the progress of this test and after, there was an erratic action in the operation of the pump, the pump not being influenced by operating the cushion valves for quieting the valves of the water chamber. This led to an investigation of the reheaters connected with the steam end. Upon opening this up we found one tube split and another broken off. These were repaired, and from that time on we were enabled to better control the action of the pump. On June 23 a slip test was made with all valves and seats 'straight port' being in the best of condition. The slip was 10.06 per cent. On August 5 the slip indicated 9.04 per cent., and on August 15 it had increased to 11.5 per cent. The minimum slip having been reached as per test of August 5. Between August 15 and September 9 part of the straight port seats were replaced with turbine valve seats. On September 9 the slip indicate was 8.05 per cent. During this time and after, and up to February 25, 1914, the old straight port seats were gradually replaced by Boyd turbine valve seats. The minimum slip obtained was on December 10, when the pump indicated 3 per cent. On January 26, 1914, with two decks of the old straight port seats still in the pump, the slip had increased to 7.4 per cent. On February 27, after replacing the balance of the straight port seats with turbine valve seats, the slip test indicated 4.8 per cent. The slip at this writing is 5.7 per cent. One thing very noticeable with the turbine valve seats has been that the pump is very quiet in its water end, while heretofore it was always very noisy.

"From the above you will note that with the old straight port seats that the slip increased from 9.04 to 11.5 per cent. in a period of ten days, while with the turbine valve seats, from February 27 to date, there has been an approximate increase of 0.9 per cent. of one per cent. in the slip. From September 9, date of first test with part turbine valves to date, there has been experienced no trouble with the turbine valves, nor has the pump been shut down on that account, except that on three different occasions a seat worked loose from the deck. There have been no broken valves nor broken springs, the same, however, has been a frequent occurrence with valves and springs on straight port seats. From September 9 to date the pump has been actually in service for 24 hours per day and for 127 days. On this day Pump No. 1207 was cut out of service for the purpose of examining some of the seats and for the removal of valves and part of the Boyd Turbine arrangement, for examination and submission to you with this report. The three valves from Pump No. 1207 are as follows: A Dick cotton-duck valve and the soft rubber valve, both of which were in the test. The third or hard rubber valve, was one of the first installed about September 9. The soft rubber valve and the Dick cotton-duck valve were placed February 25. All three valves showed no signs of cutting except the hard rubber valve, and in that the cuts are circular, which would indicate plainly that the valve has been rotating—one of the principal features of the Boyd valves. On the other hand you will notice that the soft rubber valve has an imprint of the bridges, which bridges by the way are below the surface of the seats. It would indicate that the valve has not been turning and upon examination of back of the valve and the center hole apparently the valve has not been riding true. This might be occasioned by binding on the stem or being too neat a fit in the cup. The Dick cotton-duck valve and soft rubber valve were placed on February 25, 1914. Particularly noticeable on all the valves was the carrying of sand granules by the water. All turbine valve seats examined show a good face and entire absence of the trouble experienced with the straight port seats, i. e., no cutting. The turbine valves' stem and piston pockets, however, show the effects of wear, both due to the spring and the plunger at the top of the valve cup. This wear you will notice on a sample submitted. The indication is that the springs fit a little too tight and may be the cause of the condition as shown on the soft rubber valve. For comparison I send a second hard rubber valve from Pump No. 1207 that has been on the turbine seats, and then too a hard rubber valve and soft rubber valve and a cotton-duck valve from Pump No. 839. The No. 839 valves were placed December 9, 1913, on straight port seats with the bridges flush with the top of the seats. The soft rubber valves showed the entire imprint of the bridges with no rotary movement, and doubtless in a short time would be considerably bellied. The cotton-duck valve shows the imprint of the bridges also, but this valve had not apparently been seating in the same position continuously, for what reason I am unable to say. The hard rubber valve at this writing shows a good seat, and further, that it is just beginning to impress itself upon the bridges, which can be noticed by a close examination of the face.

"Pump No. 839, on November 13, with straight port seats, the slip had increased to 24.4 per cent., and as it was essential that there be something done therewith, the seats were overhauled and many were replaced by seats taken out of Pump No. 1207 at the time of installing turbine valves. The best condition of slip was obtained with all valves renewed and the seats in good condition on January 19, when it was 8 per cent. On February 10 this had increased to 10 per cent.

"It has been impracticable to make a test for steam consumption on account of weather conditions and the carrying of the condensate from the pumping station to the meter-room and across the lawn. Any reduction in the steam consumption, however, should not be credited entirely to the turbine valves, nor at the same time should they be credited with the total reduction in slip from 11 per cent. down, but I do not think they should be credited to all reduction in slip below 9 per cent., because with the straight port seats we are unable to approximately reach that condition only. The turbine valve seats are favored for making a perfect seal by the depressed bridges and covering the valve with a cup. The extremely important points in favor of the turbine valve seats, to me, are the reduction in slip; the continued low slip conditions; the absence of broken valves and springs, i. e., necessitating the shutting down of the pump and replacement; the quiet operation and lack of shocks on the valve deck, due to slamming valves, and last, but not least, that the valve seats with the turbine valves show a high polish, as against radial cutting, as on straight port seats, where the valves always drop back into their original position. The advantage of this can readily be appreciated when it is realized to reduce slip on straight port seats and obtain the best conditions, the seats too must be refaced in position which entails considerable work. The wear shown on the turbine valve parts is also, to some extent, offset in the case of straight port valve seat parts. Since writing above I have also had a turbine seat and straight port seat taken out and the difference in action on the seat is that the turbine is smooth and bright, while the straight port is considerably cut radially at the hub.

"In conclusion, I am unable to find any condition with the turbine valve which would warrant me to condemn them, as they have given good service, and they have a great deal to commend them."

An experimental mechanical stoker was installed under one of the boilers at the Eastern Pumping Station by its inventor, but up until the end of the year it had not proved satisfactory. It has been rebuilt, however, and it is hoped that it will eventually prove a success. If this mechanical stoker is successful, it will make it possible to install stokers of this description at a very much smaller cost than has been possible heretofore. One big advantage in the installation of this mechanical stoker, if successful, will be the practical elimination of the smoke from the chimney at this station.

At the Western Pumping Station the pumps and boilers have given little trouble during the year, but it was necessary to relay a considerable portion of the piping just outside of the station. A cross connection controlled by a six-inch valve was also made between the Eastern and Western Upper Services and by means of this connection it was possible to pump to both services with one pump.

In the 1912 appropriation, provision was made for an auxiliary pumping station at Lake Ashburton to help out the Western Pumping Station on the Western Upper Service. It was found possible, however, to utilize the pump to better advantage, owing to the abovementioned cross connection and a more careful study of the entire situation in conjunction with the proposed filtration work showed that this auxiliary pumping station would not be in a position to be used after the Filtration Plant is placed in operation, and water from covered reservoirs only will be used.

Messrs. Freeman & Stearns recommended that all water used by the city be kept in covered reservoirs, the present Middle and Low Services being fed from the new filtered water reservoirs at the Filtration Plant at Montebello, while the High Service would be fed from the Western High Service Reservoir in Druid Hill Park, which they recommended to be covered. Their investigation, however, did not cover the Upper Service District, fed from the stand pipes in West Arlington and Roland Park, the water from which is pumped from either Druid Lake or Hampden Lake, both of which reservoirs they recommend to be abandoned for ordinary uses.

As the Western Pumping Station, especially in connection with the summer consumption of water in the Western Upper Service, has about reached the limits of its pumping capacity, and as Druid Lake and Hampden Lake will be put out of commission after the completion of the Filtration Plant, rather than spend the money appropriated for the auxiliary pumping station at Lake Ashburton, it seemed wiser to hold this money and let it be applied toward the building of an upper service pumping station, taking suction from the covered Western High Service Reservoir in Druid Hill Park. Provisions have been made for building this new pumping station during the year 1914.

At the machine shop at Gay Street Yard the work done has been greatly in excess of that of any year in its history. This has been due to the large amount of mains laid during the year, the work of the Department due to the improved paving and the new sewers, the work on the new improvements provided for by the 1958 Loan, and the work of repairing and painting automobiles, not only for the Water Department, but for the various departments of the city government. The facilities for the repair of automobiles, however, are not very good, and a separate fire-proof building should be provided for this work.

COUNTY DIVISION

The County Division has charge of the various reservoirs owned by the city and the lands adjacent thereto, excepting where such lands are under the direct charge of the Park Department. The various reservoirs and their surroundings are in good order, with the exception of Lake Ashburton, the grounds adjoining which were turned over to the Park Department. The Park Department, however, has had no funds to spend on these grounds and they are in a very unsightly condition.

The work of purifying the water supply by the addition of alum and hypochlorite has also been carried out by the County Division during the year 1913. The plant for adding hypochlorite to the water was removed from Loch Raven to the Gate House at Lake Montebello about the end of 1912 and has been in operation during the entire year of 1913 at this point. It was expected that it would be possible to use a considerable less amount of hypochlorite on the effluent from Lake Montebello after the water had been treated with alum and settled clear. Acting upon this theory, the amount of available chlorine was reduced to eight-tenths part per million. This quantity was evidently not enough to kill the typhoid bacteria, as during the latter part of July and in August, the number of cases of typhoid fever in this city increased to a considerable extent over what it had been during the same periods during the year 1911 and 1912, as shown in the accompanying table giving the typhoid fever statistics for a number of years.

TYPHOID FEVER IN BALTIMORE—JANUARY, 1906, TO DECEMBER, 1913; SHOWING DECREASE IN MORBIDITY AND MORTALITY SINCE THE USE OF HYPOCHLORITE.

Month.	1906		1907		1908		1909		1910		Average 1906-1910		1911		1912		1913	
	Case Incidence.	Deaths.	Case Incidence.	Deaths.	Case Incidence.	Deaths.	Case Incidence.	Deaths.	Case Incidence.	Deaths.	Case Incidence.	Deaths.	Case Incidence.	Deaths.	Case Incidence.	Deaths.	Case Incidence.	Deaths.
January.........	31	12	43	**12**	47	7	39	16	40	7	49	11	55	11	47	9	53	8
February........	31	6	16	5	26	9	23	3	25	11	24	7	31	3	28	7	40	13
March..........	25	6	37	6	36	3	20	5	30	12	29	6	35	5	33	11	38	8
April...........	67	11	35	17	24	2	22	4	22	4	36	11	44	8	37	10	17	3
May............	143	12	65	3	40	3	23	5	31	2	60	5	56	7	30	3	31	6
June............	87	5	41	6	47	3	41	6	46	8	52	4	34	8	57	3	51	9
July............	105	14	78	22	149	24	107	11	110	7	110	16	89	4	98	15	148	15
August..........	284	34	217	23	339	35	217	20	473	30	306	28	280	22	198	22	314	22
September.......	206	32	469	41	364	29	312	24	398	49	349	35	241	31	212	18	233	20
October.........	125	26	241	47	187	30	138	23	359	42	210	34	170	28	190	12	129	18
November.......	59	15	87	31	99	25	61	10	251	37	111	24	104	19	77	9	65	8
December.......	46	10	91	17	68	10	66	9	106	26	75	14	62	8	76	17	44	5
Totals.....	1209	183	1420	230	1420	180	1069	136	1891	235	1402	195	1201	154	1083	136	1163	135

The quantity of available chlorine was increased to one part per million about the end of July and in the early part of August to one and one-half parts per million and later to two parts per million. This increased quantity of the chemical gave a practically sterile water and the number of typhoid fever cases decreased during September, and in October the number of cases was less than in the two preceding years.

This greatly increased amount of hypochlorite which it was necessary to add to the water supply produced a decidedly unpleasant odor, and analyses showed that there was free chlorine in the water. The quantity of chlorine was reduced as cold weather approached, and the experience of the Department would clearly indicate that the quantity of chlorine should be varied according to the season of the year when it is used.

In the summer time when the water is warmer and the pollution is probably more pronounced than in the winter time the quantity of hypochlorite added to the water should be increased. With the approach of cold weather this quantity can be reduced, but with the approach of warm weather in the spring this quantity should be increased with the maximum in June and during the summer months of July, August and September.

The treatment of the water supply with alum for the purpose of clarifying it was carried out during the year, but it was found that a considerable less quantity of alum could be used than was used in the beginning of this treatment The quantity of alum used at the start in 1912 was based upon the experience in Washington. It was found, however, that with the long storage period available in Montebello, considerably smaller quantities of alum could be used and good results still be obtained, and the expense of treating the water with alum was almost cut in two as the result of making a careful study of local conditions.

The results obtained by the treatment of the water supply by both the hypochlorite and the alum are given very thoroughly in the report of Mr. J. Bosley Thomas, bacteriologist for the Department, and the tables prepared by Mr. Thomas most carefully and thoroughly show the condition of our water supply during the past year.

Mr. Thomas' report is given in Appendix No. 5.

Several of the farms purchased in connection with the construction of the new Loch Raven dam were leased for a nominal rental, with the object of sowing them in grass. That is, the tenants planted grass crops along with such other crops as corn and wheat, leaving the fields sowed in grass after the other crop had been harvested.

In the operations of the Forestry Department 94,485 young trees were purchased and set in the nursery. Twenty-six thousand seven hundred and eighty-six trees were transplanted from the nursery to high ground on the west side of Loch Raven south of the Meredith's Ford Bridge. One thousand three hundred trees were purchased and set in the nursery for future street planting. The City Forester has been working with the Water Department during the year and has developed a plan for tree planting along the greater part of the water shed now owned by the city, and planting on a large scale will be started during the spring of 1914 on the property which the city now owns.

A description of the planting plan worked out by the City Forester, together with a map, is given in Appendix 6.

FILTRATION DIVISION

Before outlining the work done at the Filtration Division during the year, a description is here given so that the details of this work can be better understood.

The Filtration Plant originally recommended by Messrs. Stearns & Freeman contemplated the building of coagulating basins and slow sand filters. The reasons for changing these plans are outlined in the report of Mr. George W. Fuller, which is given in Appendix No. 1.

The present plans contemplate the building of:

First—Low lift pumping station.

Second—Aerators.

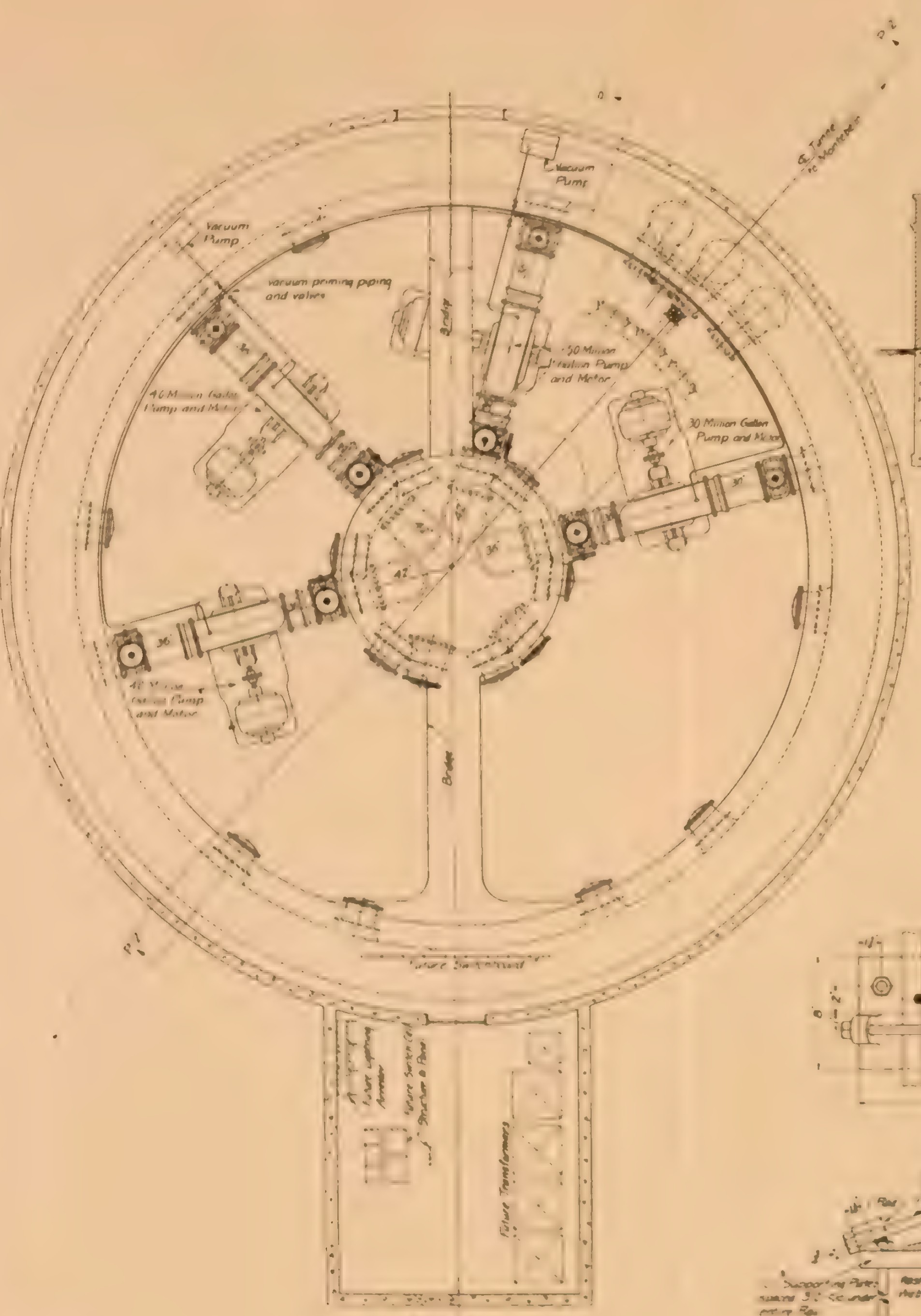
Third—Filtration plant proper, including the chemical house, coagulating basins and filters.

Fourth—Filter water reservoirs.

Low-Lift Pumping Station.

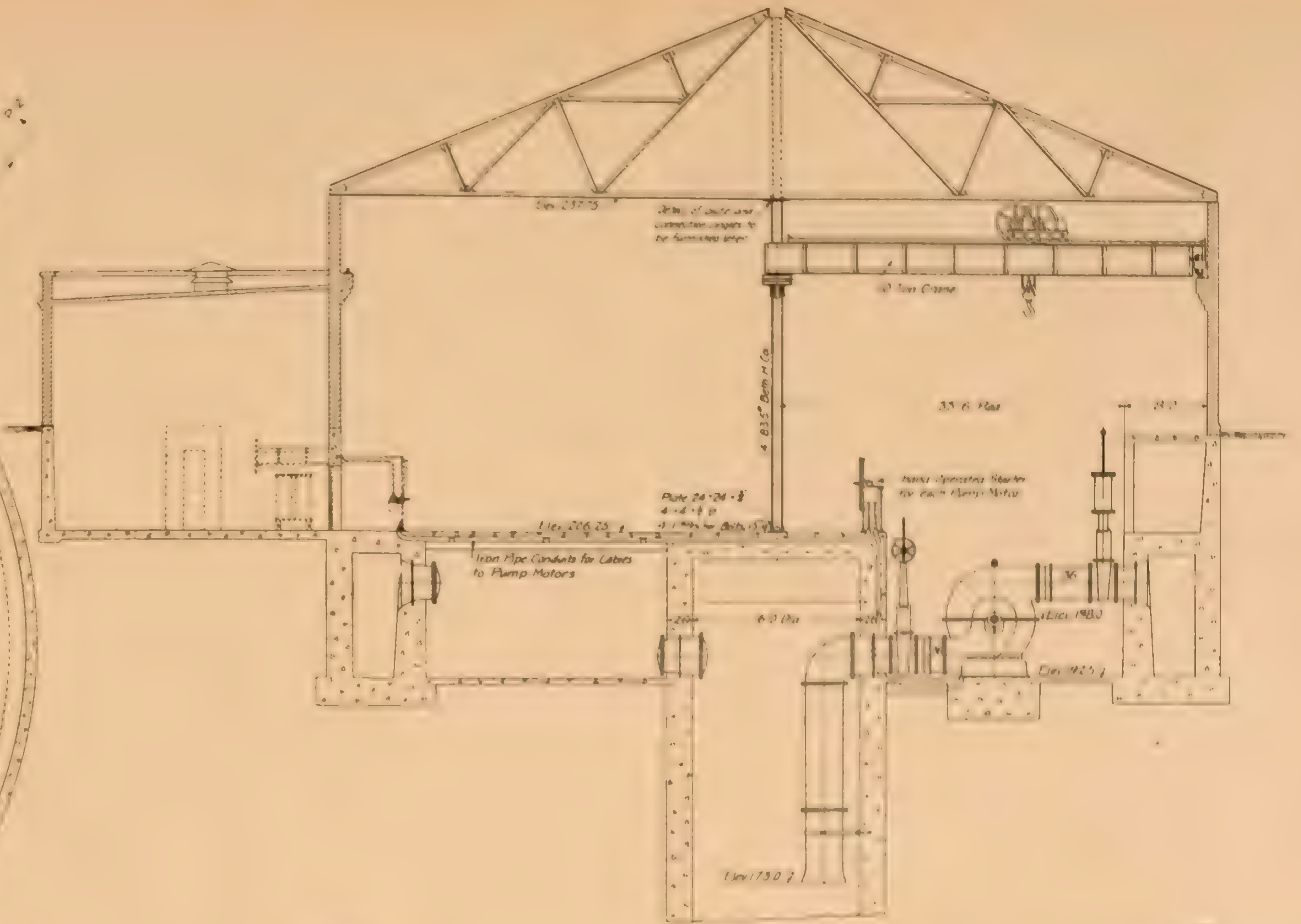
Had the high dam been built, the water would flow by gravity to the filtration plant during ordinary seasons. Should there be a protracted dry spell, however, requiring that the water back of the new dam be drawn down for a distance of about ten feet, it would then have become necessary to have put in low lift pumps to raise the water to the filtration plant. Mr. Allen Hazen, in his report to Messrs. Stearns & Freeman upon the filtration plant, recommended the putting in of a screw pump for this purpose.

An additional reason for having pumps available even with the high dam is the desirability of aerating the water in order to remove

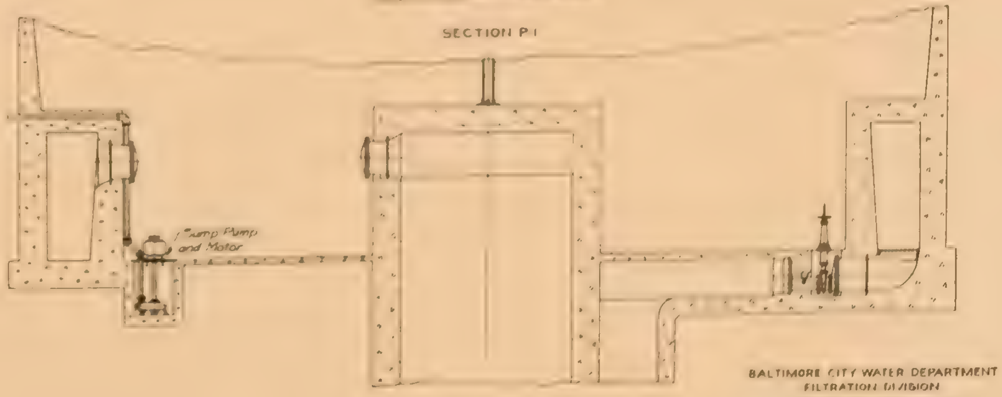

Vacuum Pumps
Vacuum Pump
Vacuum priming piping and valves
40 Million Gallon Pump and Motor
50 Million Gallon Pump and Motor
30 Million Gallon Pump and Motor
42 Million Gallon Pump and Motor
Bridge
36"
42"
30"
℄ Tunnel to Montebello
P-2
P-1
Future Transformers

P-1 →

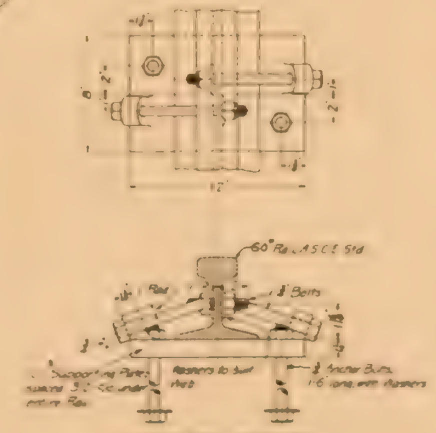
PLAN


Elev. 237.75
Details of truss and connection angles to be furnished later
10 Ton Crane
4 8.35° Beth H Co.
33'-6" Rad.
Elev. 206.25
Plate 24 × 24 × ⅜
Iron Pipe Conduits for Cables to Pump Motors
Hand Operated Starter for each Pump Motor
6'-0" Dia.
Elev. 198.0
Elev. 192.5
Elev. 173.0

SECTION P-1


Sump Pump and Motor

SECTION P-2


12"
60° Rail A.S.C.E. Std.
Rail
⅞ Bolts
Supporting Plates
Washers to suit
⅞ Anchor Bolts 1'-6" long with Washers

CRANE RAIL ANCHORAGE

BALTIMORE CITY WATER DEPARTMENT
FILTRATION DIVISION
CONTRACTS NOS. 19 & 20

DIAGRAMMATIC DRAWING SHOWING PUMPING MACHINERY & CRANE

AUG 1, 1913

0 1 2 3 4 5 FT

Drawn C. S.
Traced C. S.
Checked

James W. Armstrong
Engineer Filtration Div.

Ezra B. Whitman
Water Engineer

Drawing No 71 A 4

tastes and odors due to algae growth in Loch Raven, should this ever become necessary, as the filtration plant will not remove the tastes and odors due to these growths. Studies were made during the year 1912 into the various forms of nozzles which might be used for aeration and the results of these experiments were given in the report for 1912.

The decision not to construct the high dam at the present time made it necessary to build a more elaborate pumping station than would have been required for these intermittent purposes, but the cost of the pumping machinery and station itself is not a very material part of the cost of the filtration plant, as it amounts to not more than $50,000 in the total expenditure of about $1,750,000, and of this amount only about one-half of it is in excess of what would have been expended had the high dam been constructed.

The plan of this pumping station is shown on the accompanying drawing, No. 71-A-4. The existing Loch Raven-Montebello tunnel, bringing the water from the Gunpowder River to the city, will be tapped by a vertical shaft, and the suction from the low lift centrifugal pumps will extend down into this vertical shaft. The pumps will be arranged around this vertical shaft as shown on the drawing and the pumping station itself will be circular in form.

At the present time there will be four units installed, one having a capacity of fifty million gallons per day, two having a capacity of forty million gallons each per day and one having a capacity of thirty million gallons per day. These capacities are varied in this manner so that it will be possible to operate the pumps at their rated speeds to give the amount of water required by the city consumption which varies considerably from season to season. It is estimated that the lowest daily consumption required will be about seventy million gallons per day, and one forty-million-gallon pump and the thirty-million-gallon pump will furnish this amount of water. Should the consumption reach eighty million gallons per day, the two forty-million-gallon pumps will be brought into operation. Should the consumption reach ninety million gallons per day, one forty-million-gallon pump and the fifty-million-gallon pump will be placed in operation. And so the use of the pumps will be varied according to the daily consumption, and by using the pumps at their rated capacities it is anticipated that the greatest efficiency in the operation of the pumping station can be secured.

After a close study of the existing conditions, it was decided to operate the pumps by means of electricity instead of steam. The fact that the pumps will be used only intermittently after the high dam is completed, combined with the low price at which electricity can be obtained from the Susquehanna, did not seem to warrant the large expenditures required for installing a steam driven plant.

Another very important factor in making this decision is the fact that it is practically impossible to bring a railroad siding into the filtration plant and all coal for operating the steam plant would have had to be hauled a distance of approximately two miles.

One of the advantages of the circular form of pumping station is that a comparatively simple arrangement can be made for handling the machinery by means of a radial hand operated revolving crane.

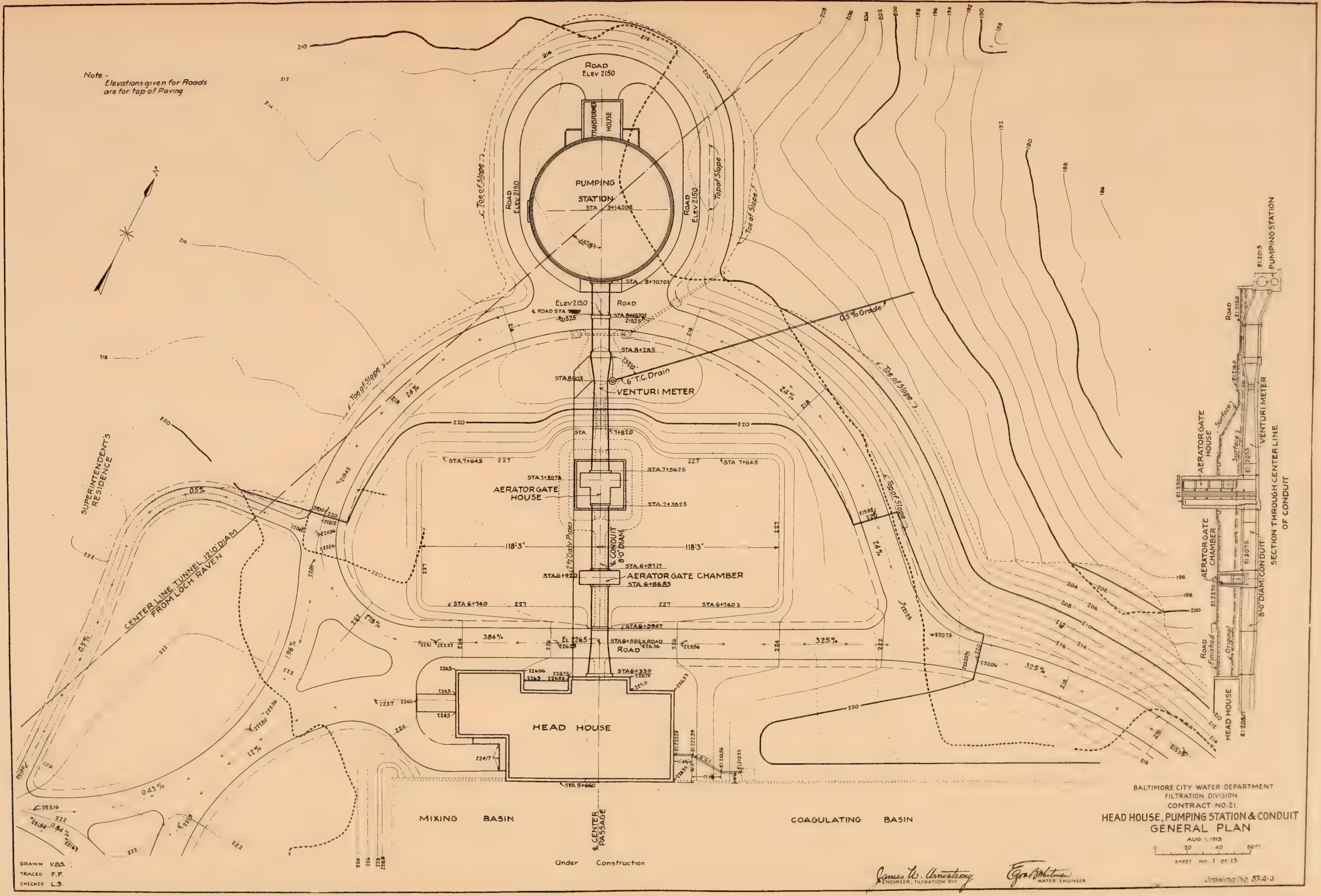
The pumping station and the shaft are so arranged that the water can be delivered to the filtration plant or it can be by-passed into the tunnel leading into Lake Montebello. A large 60-inch valve or sluice gate is also provided in the shaft by means of which the water can be allowed to flow by gravity directly into Lake Montebello as it does at the present time, if at any time it should become necessary to cut out the filtration plant entirely for any extensive repairs or improvements. This is a very remote contingency, but it seemed worth while to make this provision as it could be done at a comparatively small cost.

Aerators

Mr. George W. Fuller recommended that provision be made for aeration of water, at least on paper, and such provisions has been made along the conduit between the pumping station and the head house at Lake Montebello, as is shown on the accompanying drawing No. 87-A-4.

If the intake at the new dam can be arranged so that bottom water can be effectively drawn off during the summer months it may be possible to escape the necessity of using aeration, but it is deemed best to make some provision for combating the difficulties which may arise from the essential oils released from the microscopic growths and the decomposition products resulting from the loss of dissolved oxygen in the bottom water.

Plans for aeration have therefore been made, although the aerators themselves will not be constructed unless they become absolutely necessary in order to remove unpleasant taste and odors from the water which cannot be removed by filtration.


Note - Elevations given for Roads are for top of Paving
ROAD ELEV 2150
TRANSFORMER HOUSE
PUMPING STATION
STA 9+14.20±
Toe of Slope
Top of Slope
ROAD ELEV 2150
STA 8+70.70±
ELEV 2150
ROAD
ROAD STA
STA 8+49.70±
STA 8+28.5
6" T.C. Drain
VENTURI METER
0.5% Grade
24%
220
STA 7+82.0
STA 7+64.5
227
STA 7+50.75
STA 7+56.25
STA 7+35.25
AERATOR GATE HOUSE
118'-3"
CONDUIT 8'-0" DIAM
2½" Galv Pipes
STA 6+97.17
STA 6+92.0
AERATOR GATE CHAMBER
STA 6+86.83
STA 6+74.0
STA 6+53.67
3.84%
3.25%
EL 226.5
STA 6+52.0 ROAD
ROAD
STA 6+33.0
HEAD HOUSE
STA 5+66.0
SUPERINTENDENT'S RESIDENCE
CENTER LINE TUNNEL 12'-0" DIAM FROM LOCH RAVEN
0.5%
1.96%
2.78%
1.2%
0.43%
0.84%
MIXING BASIN
CENTER PASSAGE
COAGULATING BASIN
Under Construction
PUMPING STATION
EL 201.5
ROAD
EL 215.0
VENTURI METER
Surface
AERATOR GATE HOUSE
EL 250.0
EL 207.5
AERATOR GATE CHAMBER
EL 207.6
EL 227.0
8'-0" DIAM CONDUIT
SECTION THROUGH CENTER LINE OF CONDUIT
ROAD
Finished
Original
HEAD HOUSE
EL 208.0
DRAWN V.B.S.
TRACED F.F.
CHECKED L.S.

BALTIMORE CITY WATER DEPARTMENT
FILTRATION DIVISION
CONTRACT NO. 21.

HEAD HOUSE, PUMPING STATION & CONDUIT
GENERAL PLAN

AUG. 1, 1913

0 20 40 60 FT

SHEET NO 1 OF 13

James W. Armstrong
ENGINEER, FILTRATION DIV

Geo. B. Whitman
WATER ENGINEER

Drawing No 87-A-3

Head House.

The water after leaving the pumping station passes through an eight-foot conduit into a Venturi meter and from there passes through chambers in the conduit to be used in case aeration is found to be necessary. This eight-foot conduit is extended to just outside of the head house, where its suction is changed so that it enters the head house as a rectangular shaped conduit ten feet two inches wide by five feet high. Before entering the mixing basin a stilling chamber is provided for the purpose of taking care of any quick changes in the operations of the pumps.

In the head house are stored the various chemicals used in the treatment of the water, and here also are located the apparatus and devices for automatically controlling the application of these chemicals to the water before entering the mixing basin. It is proposed to use lime and sulphate of iron for coagulating purposes, although alum could be used if this were found desirable.

There are two reasons why the lime and iron are used instead of alum. In the first place the lime and iron will be cheaper in the cost of chemicals, and in the second place, it is not anticipated that there will be as much trouble from red water due to rust in the iron pipes of the distribution system and the pipes in the houses where lime and iron are used, as would be the case were alum used.

Provision is also made for adding calcium hypochlorite to the water after it has passed through the filtration plant. It is anticipated that only a small quantity of hypochlorite need be used to kill the few remaining germs that are in the water after it has passed through the filters. The use of hypochlorite is largely a precautionary measure to kill pathogenic bacteria which might pass through the filters, although it is not anticipated that there will be many bacteria of this type that will survive the passage of the water through the filtration plant.

It will be practically impossible to bring the chemicals into the filtration plant by means of a railroad, so provision has been made to use automobile trucks for this purpose. The trucks will drive on a platform scale located at the northern end of the head house, where the chemicals will be weighed.

The lime will be dumped from automobile trucks on a mezzanine floor in the basement of the building. From here it will be passed through a crusher into the bucket elevator and will be lifted into the tower from where it will be spouted into the storage bins, of which there are fifteen, each one of which measures nine by nine feet inside and is approximately 23 feet deep.

It will be withdrawn from the bottom of the bins into trolley buckets, which will hold about 800 pounds each. These buckets are suspended from an overhead "I" beam which passes over the mixing tanks. The buckets are suspended by roller bearing trolleys and can easily be pushed by one man.

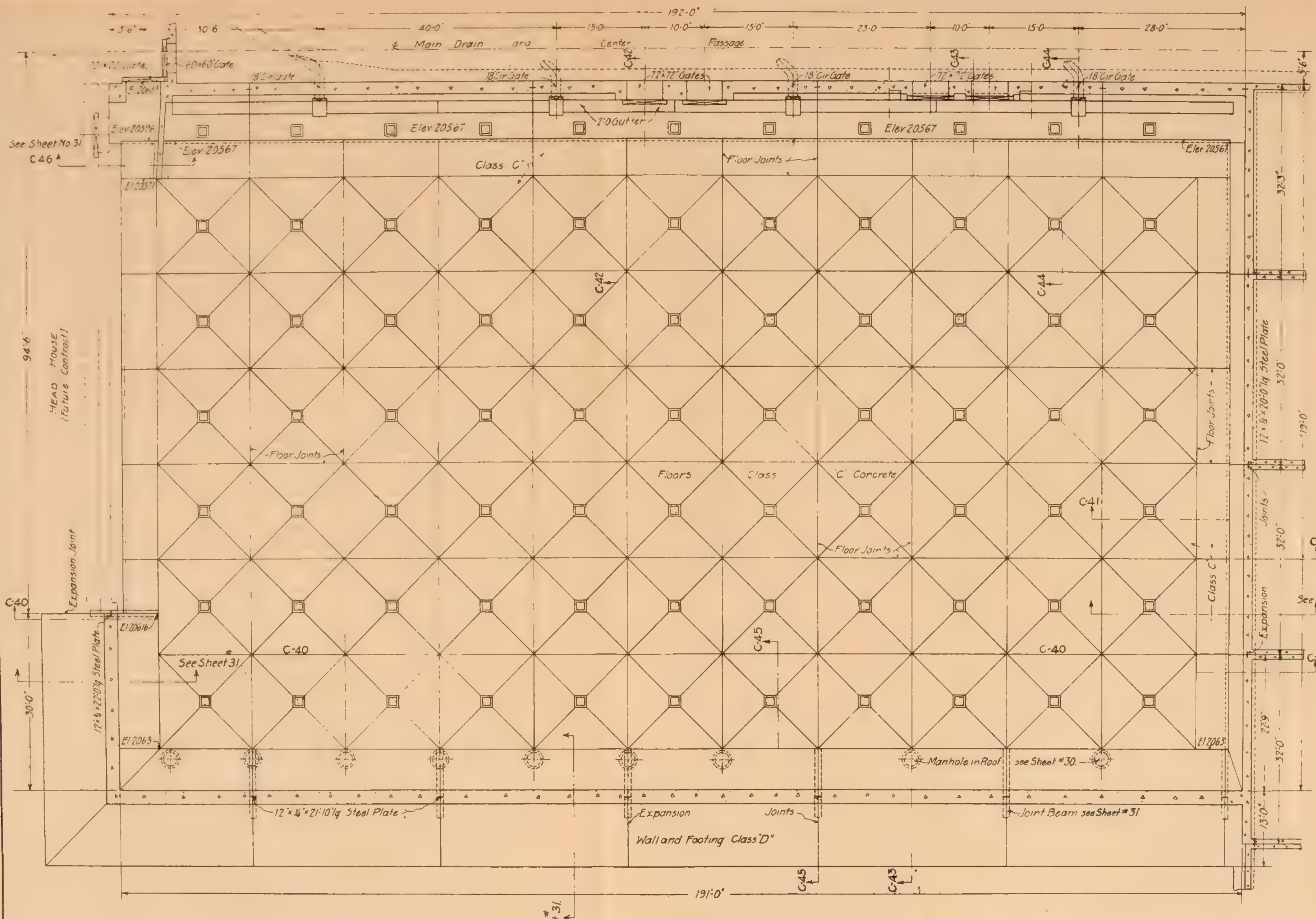
The lime is discharged from the trolley buckets into concrete mixers, which have been especially adapted for the handling of lime. From the concrete mixers the lime is discharged into steel troughs which lead to the solution tanks, of which there are three, each 14 feet in diameter by 14 feet deep. As the lime tends to settle very rapidly, it will be kept in suspension by means of propeller blades operated at 750 revolutions per minute by motors placed below the tank. From the solution tank the lime flows directly to the chemical controllers and after passing through the controllers is applied to the water at the point where it enters the mixing basin.

The sulphate of iron will be handled in the same manner as the lime, except that it will not be passed through the crusher and will be dissolved in concrete boxes to which the water is applied through a pipe grid supported on the floor of the boxes. The solution will be stored in four concrete tanks, each measuring 12 by 9 feet inside by 16 feet deep. The sulphate of iron will be piped to the mixing basin, where it can be added at various points along the center passage as it may be deemed most advisable to apply it.

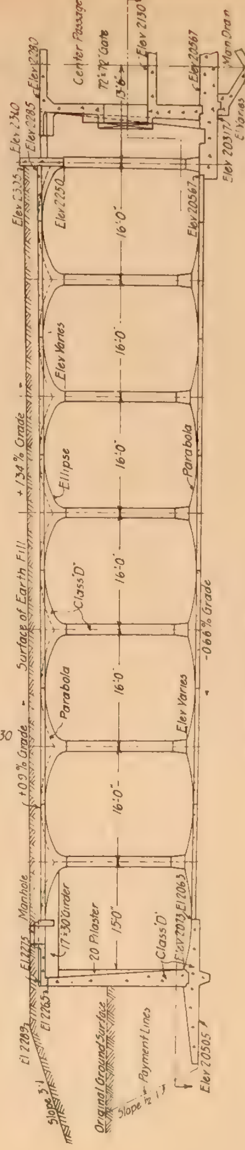
The hypochlorite of lime will be received in steel drums weighing from seven to eight hundred pounds and will be lifted on the freight elevator to the mixing floor, where they will be transported to the dissolving boxes by means of an overhead trolley. The dissolving boxes are designed so that the drums can be opened under water, thus saving the annoyance due to the escape of chlorine gas. The hypochlorite of lime will be added to the water at points at the east end of the filter galleries as the water enters the basins under the filters.

Mixing Basins.

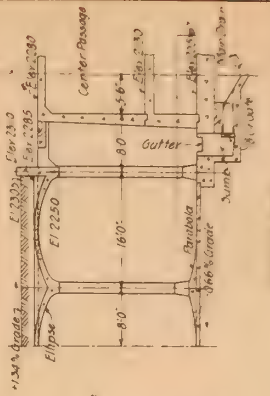
The water enters the mixing basins from the stilling chamber of the head house. This mixing chamber is covered with groined arches, as shown on Drawing No. 58-A-3, and it is divided up into passages eight feet wide by means of wooden baffles as shown on Drawing No. 61-A-3. The time of passage of the water through the mixing basin based upon the rated capacity of one hundred and twenty-eight million gallons per day is approximately thirty-one minutes. The velocity with which the water will flow through the channels between the baffles at this rate would be approximately one foot. The wooden baffles are not continued throughout the entire basin, but provide for only about sixteen minutes' mixing.


192'-0"
5'6"
30'6"
40'0"
15'0
10'0"
15'0
23'0
10'0
15'0
28'0"
℄ Main Drain and Center Passage
60"×60" Gate
8' Cir Gate
18' Cir Gate
72"×72" Gates
18' Cir Gate
72"×72" Gates
18' Cir Gate
C-42
C-43
C-44
5'6"
2'0" Gutter
Elev 205.67
Elev 205.67
Elev 205.96
Elev 205.67
See Sheet No 31
C-46
Class C
Floor Joints
Elev 205.67
El 205.71
94'6"
Head House (Future Contract)
Expansion Joint
32'3"
Floor Joints
C-42
C-44
12"×⅜"×20'0" lg Steel Plate
32'0"
119'0"
Floor Joints
Floors Class 'C' Concrete
C-41
Floor Joints
32'0"
Expansion Joints
Class C
C-41
See Sheet #30
C-40
El 206.16
12"×⅜"×22'0" lg Steel Plate
See Sheet 31
C-40
C-45
C-40
C-40
30'0"
El 206.3
El 206.3
Manhole in Roof see Sheet #30
22'9"
32'0"
12"×⅜"×21'10" lg Steel Plate
Expansion Joints
Joint Beam see Sheet #31
Wall and Footing Class "D"
13'0"
191'0"
C-45
C-43
See Sheet 31
N
S

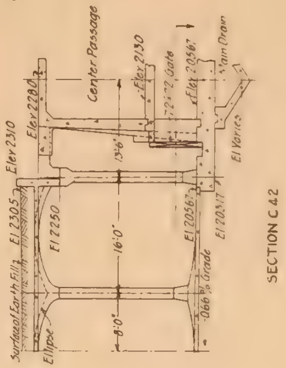
SECTIONAL PLAN


Elev 232.0
Center Passage
72"×72" Gate
Elev 213.0
13'6"
Elev 205.67
Main Drain
Elev 234.0
Elev 228.5
Elev 225.0
Elev 232.5
Elev 205.67
Elev 203.17
El Varies
16'0"
+1.34% Grade
Surface of Earth Fill
Elev Varies
Ellipse
Parabola
Class 'D'
-0.66% Grade
Parabola
Elev Varies
+1.09% Grade
Manhole
17"×30" Girder
20" Pilaster
15'0"
Class 'D'
Elev 206.3
El 227.5
El 226.5
El 228.9
Slope 3:1
Original Ground Surface
Payment Lines
Slope 1/2:1
Elev 205.05

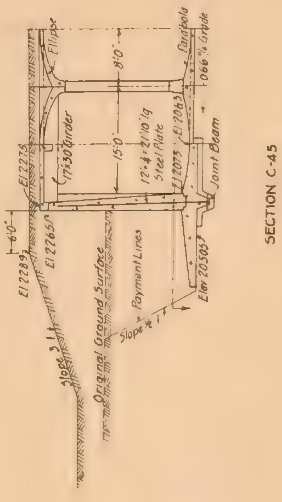
TRANSVERSE SECTION C-43


Center Passage
Elev 232.0
Elev 213.0
Main Drain
Elev 228.5
Elev 235.0
5'6"
Gutter
8'0"
Sump
El 225.0
16'0"
Parabola
+1.34% Grade
Ellipse
8'0"
0.66% Grade

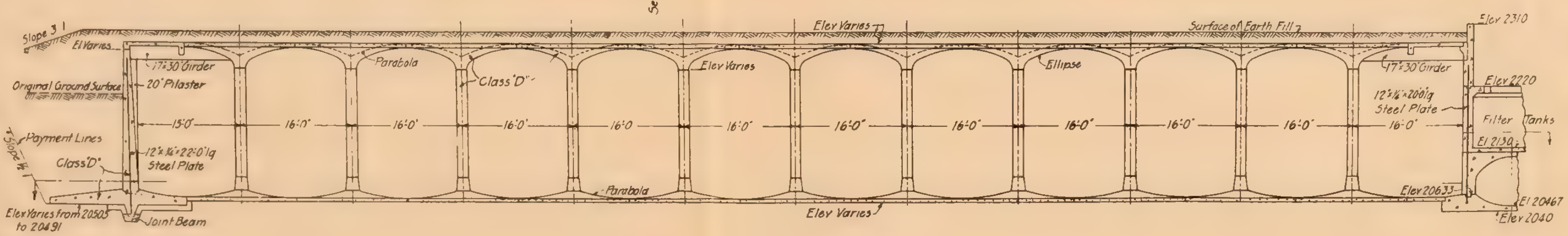
SECTION C-44


Center Passage
Elev 213.0
72"×72" Gate
Elev 205.67
Main Drain
El Varies
Elev 228.0
Elev 231.0
13'6"
Surface of Earth Fill
El 230.5
El 225.0
16'0"
Elev 205.67
El 203.17
0.66% Grade
Ellipse
8'0"

SECTION C-42

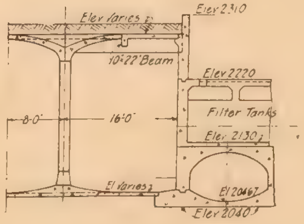

Ellipse
Parabola
0.66% Grade
8'0"
17"×30" Girder
15'0"
12"×⅜"×21'10" lg Steel Plate
El 206.3
El 227.5
El 226.5
El 228.9
6'0"
El 207.5
Joint Beam
Elev 205.05
Slope 3:1
Original Ground Surface
Payment Lines
Slope ½:1

SECTION C-45


Slope 3:1
El Varies
Original Ground Surface
Payment Lines
Class 'D'
Elev Varies from 205.05 to 204.91
17"×30" Girder
20" Pilaster
15'0"
12"×⅜"×22'0" lg Steel Plate
Joint Beam
Elev Varies
Parabola
Class 'D'
Elev Varies
Surface of Earth Fill
Ellipse
16'0"
16'0"
16'0"
16'0"
16'0"
16'0"
16'0"
16'0"
16'0"
16'0"
16'0"
Parabola
Elev Varies
17"×30" Girder
12"×⅜"×20'0" lg Steel Plate
Elev 231.0
Elev 222.0
Filter Tanks
El 213.0
Elev 206.33
El 204.67
Elev 204.0

LONGITUDINAL SECTION C-40

For Sections and Details see Sheet Nº 30 and Nº 31


Elev Varies
Elev 231.0
10"×22" Beam
Elev 222.0
Filter Tanks
Elev 213.0
8'0"
16'0"
El Varies
El 204.67
Elev 204.0

SECTION C-41

BALTIMORE CITY WATER DEPARTMENT
FILTRATION DIVISION
CONTRACT NO. 11

FILTERS, BASINS & GRADING
PLAN & SECTIONS OF MIXING BASIN

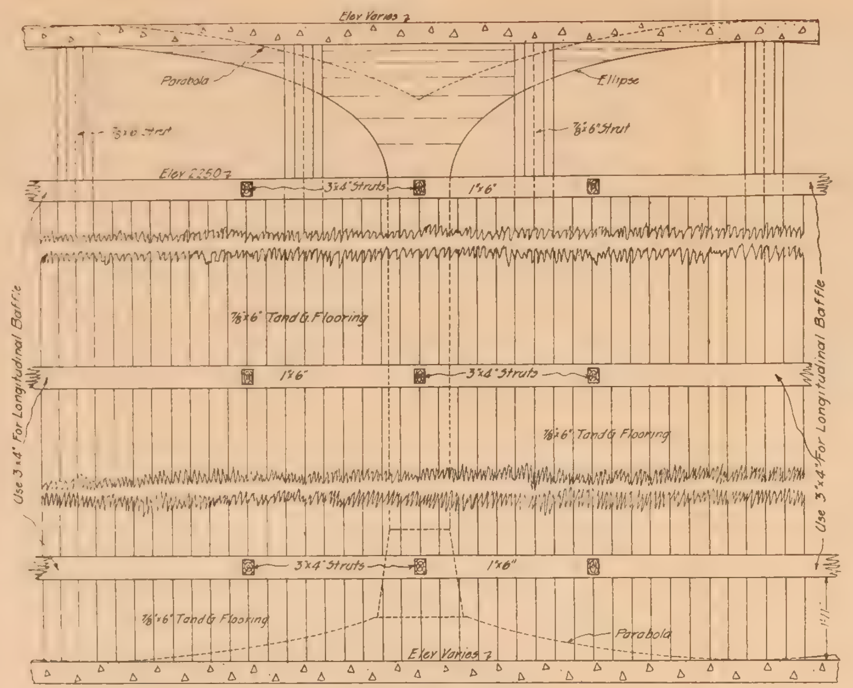
APRIL 2, 1913
0 5 10 5 20 FT
SHEET NO 29 OF 38

DRAWN V.B.S.
TRACED V.B.S.
CHECKED H.E.

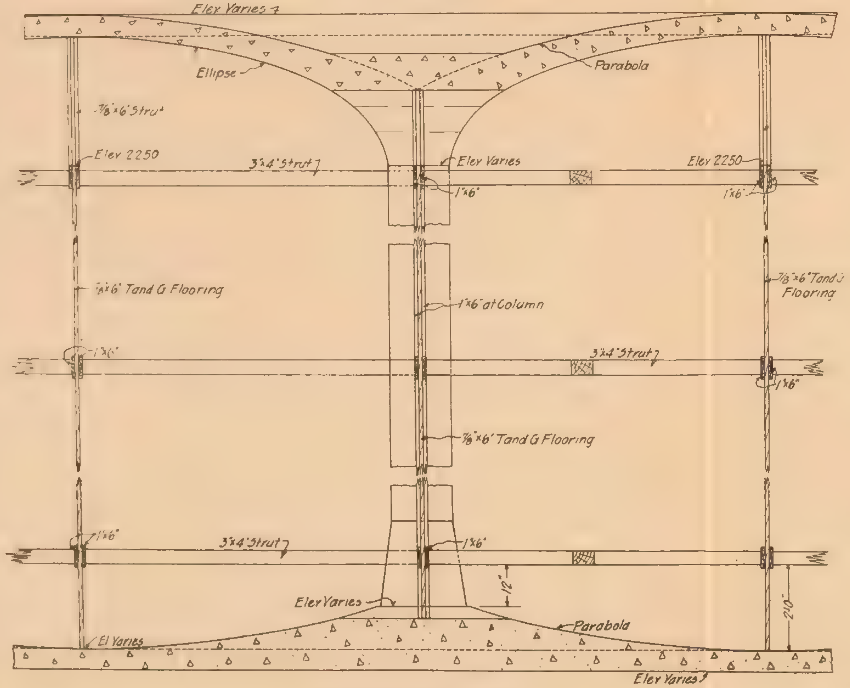
James W. Armstrong
ENGINEER, FILTRATION DIV.

Ezra B. Whitman
WATER ENGINEER

Drawing No 58 A 3

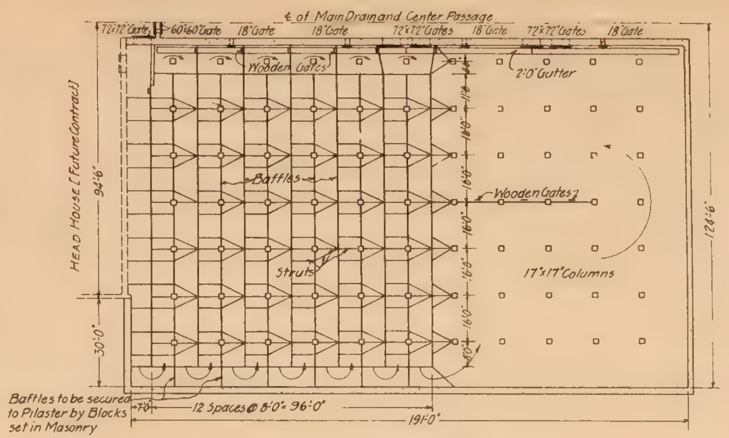

Elev Varies
Parabola
Ellipse
7/8"x6" Strut
7/8"x6" Strut
Elev 2250
3"x4" Struts
1"x6"
7/8"x6" T and G Flooring
1"x6"
3"x4" Struts
7/8"x6" T and G Flooring
Use 3"x4" For Longitudinal Baffle
Use 3"x4" For Longitudinal Baffle
3"x4" Struts
1"x6"
7/8"x6" T and G Flooring
Parabola
Elev Varies

TRANSVERSE SECTION C-50

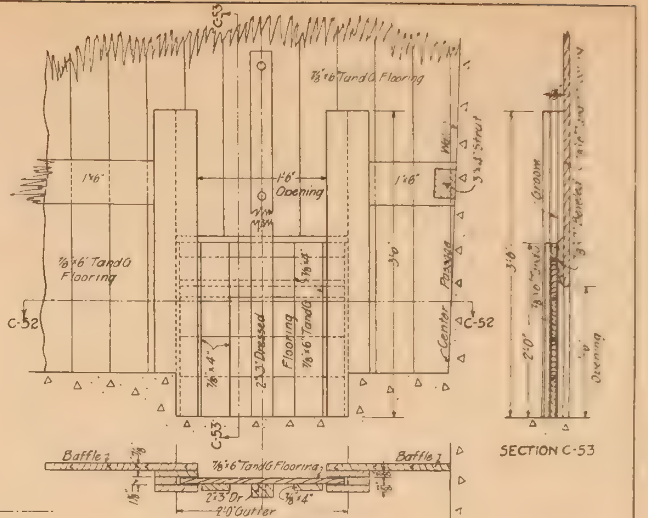

Elev Varies
Ellipse
Parabola
7/8"x6" Strut
Elev 2250
3"x4" Strut
Elev Varies
Elev 2250
1"x6"
1"x6"
7/8"x6" T and G Flooring
1"x6" at Column
7/8"x6" T and G Flooring
3"x4" Strut
1"x6"
1"x6"
7/8"x6" T and G Flooring
1"x6"
3"x4" Strut
1"x6"
12"
2'0"
Elev Varies
Parabola
El Varies
Elev Varies

LONGITUDINAL SECTION C-51

Note - All Wooden Baffle, and Gates to be Nailed.

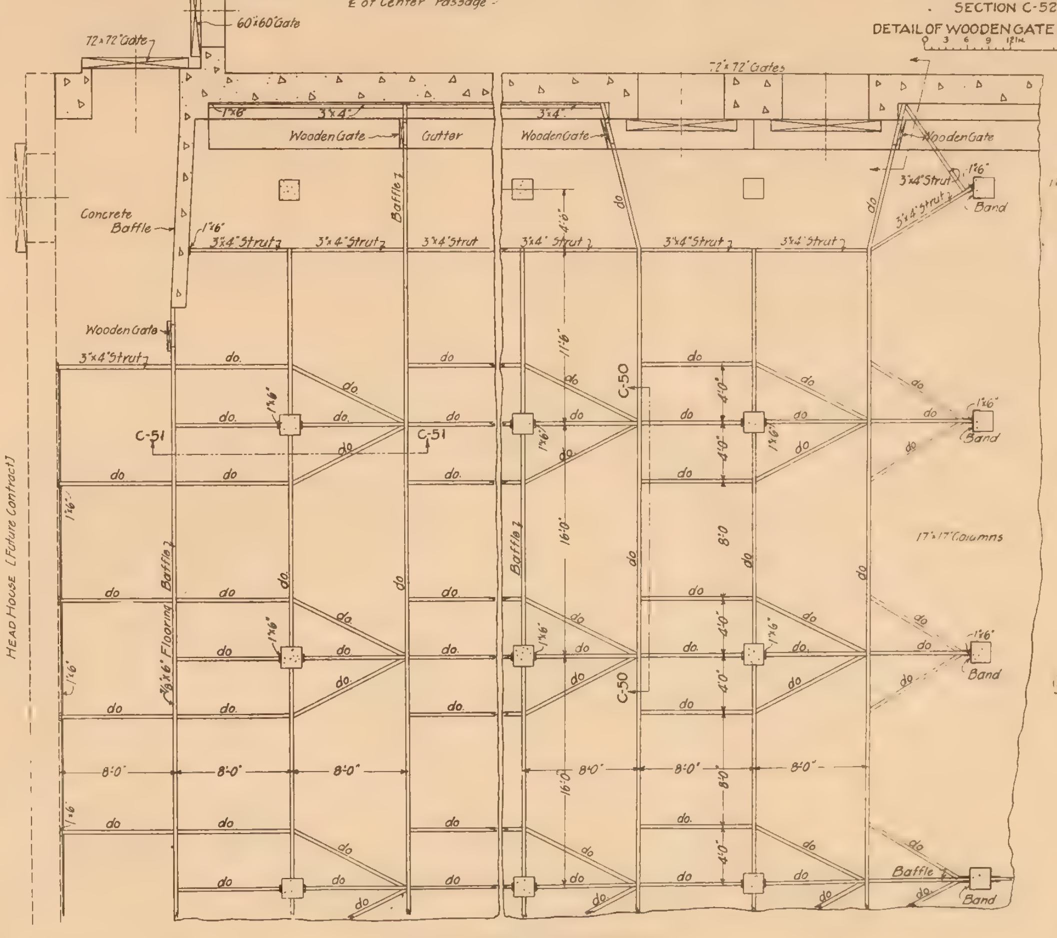

℄ of Main Drain and Center Passage
72"x72" Gate
60"x60" Gate
18" Gate
18" Gate
72"x72" Gates
18" Gate
72"x72" Gates
18" Gate
Wooden Gates
2'0" Gutter
Baffles
Wooden Gates
Struts
17"x17" Columns
HEAD HOUSE [Future Contract]
94'6"
30'0"
124'6"
16'0"
Baffles to be secured to Pilaster by Blocks set in Masonry
7'0"
12 Spaces @ 8'0" = 96'0"
191'0"

KEY PLAN OF WOODEN BAFFLES & STRUTS

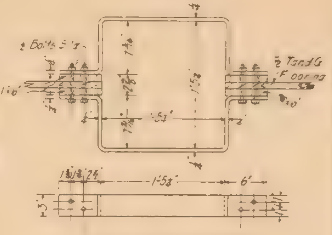

C-53
7/8"x6" T and G Flooring
1"x6"
1'6" Opening
1"x6"
3"x4" Strut
Groove
7/8"x6" T and G Flooring
C-52
C-52
Center Passage
7/8"x4"
2 1/2" Dressed
Flooring 7/8"x6" T and G
3'0"
2'0"
Opening
C-53
Baffle
Baffle
7/8"x6" T and G Flooring
2 1/2" Dr.
2'0" Gutter
SECTION C-53

SECTION C-52

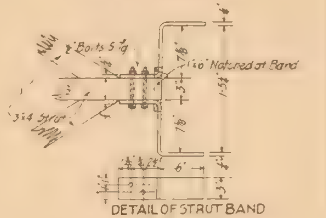
DETAIL OF WOODEN GATE - SECTION


℄ of Center Passage
60"x60" Gate
72"x72" Gate
72"x72" Gates
1"x6"
3"x4"
3"x4"
Wooden Gate
Gutter
Wooden Gate
Wooden Gate
Concrete Baffle
Baffle
3"x4" Strut
3"x4" Strut
3"x4" Strut
3"x4" Strut
3"x4" Strut
3"x4" Strut
3"x4" Strut
Band
do
Wooden Gate
3"x4" Strut
C-51
C-51
C-50
C-50
Band
17"x17" Columns
HEAD HOUSE [Future Contract]
7/8"x6" Flooring
Baffle
Baffle
Band
8'0"
8'0"
8'0"
8'0"
8'0"
8'0"
16'0"
16'0"
Baffle
Band

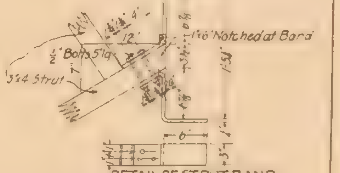
PLAN OF WOODEN BAFFLES & STRUTS


1/2" Bolts 5"
7/8" T and G Flooring
1"x6"

DETAIL OF COLUMN BAND
8 - Required


1/2" Bolts 5"
1"x6" Notched at Band
3"x4" Strut

DETAIL OF STRUT BAND
18 - Required.


1/2" Bolts 5"
1"x6" Notched at Band
3"x4" Strut

DETAIL OF STRUT BAND
3 - Required

BALTIMORE CITY WATER DEPARTMENT
FILTRATION DIVISION
CONTRACT NO. 11

FILTERS, BASINS & GRADING
BAFFLES IN MIXING BASIN

APRIL 2 1913
SCALES AS NOTED

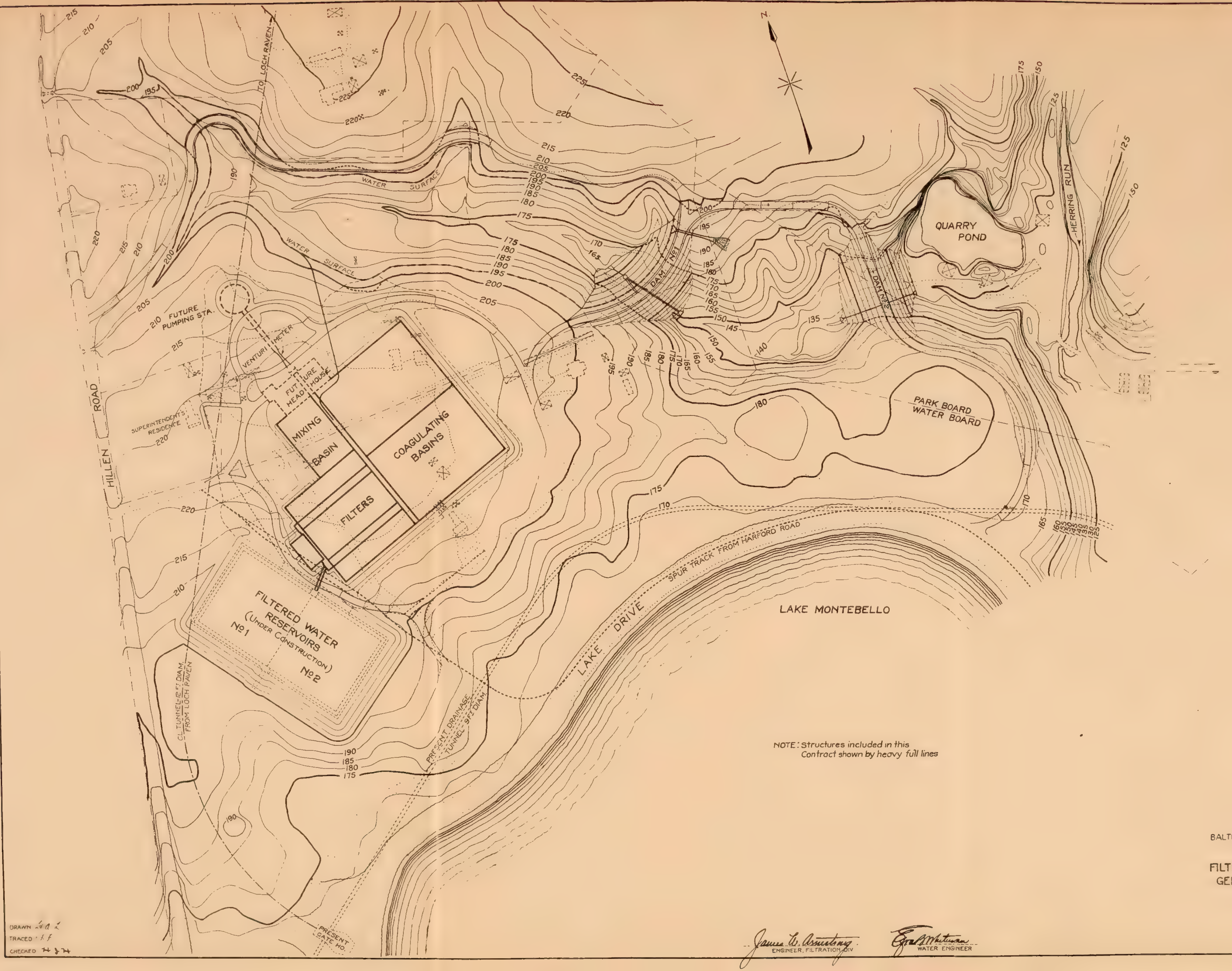
SHEET NO 32 OF 38

DRAWN W.B.J.
TRACED W.B.J.
CHECKED. H.E.T.

James W. Armstrong
ENGINEER, FILTRATION DIV

Ezra B. Whitman
WATER ENGINEER

Drawing No 6-45


N.
TO LOCH RAVEN
WATER SURFACE
WATER SURFACE
QUARRY POND
HERRING RUN
DAM Nº1
DAM Nº2
FUTURE PUMPING STA.
VENTURI METER
FUTURE HEAD HOUSE
SUPERINTENDENT'S RESIDENCE
MIXING BASIN
COAGULATING BASINS
FILTERS
FILTERED WATER RESERVOIRS (UNDER CONSTRUCTION)
Nº1
Nº2
HILLEN ROAD
PARK BOARD
WATER BOARD
LAKE MONTEBELLO
LAKE DRIVE
SPUR TRACK FROM HARFORD ROAD
C.L. TUNNEL 12 FT. DIAM. FROM LOCH RAVEN
PRESENT DRAINAGE TUNNEL 9 FT. DIAM.
PRESENT GATE HO.
225
220
215
210
205
200
195
190
185
180
175
170
165
160
155
150
145
140
135
130
125

NOTE: Structures included in this Contract shown by heavy full lines

DRAWN L. A. L.
TRACED J. F.
CHECKED H. J. H.

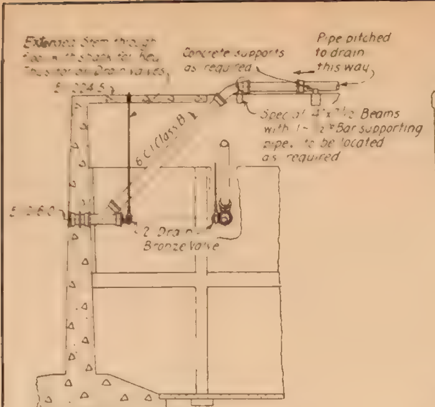
James W. Armstrong
ENGINEER, FILTRATION DIV.

Ezra B. Whitman
WATER ENGINEER

BALTIMORE CITY WATER DEPARTMENT
FILTRATION DIVISION
CONTRACT NO 11
FILTERS, BASINS & GRADING
GENERAL LOCATION PLAN
APRIL 2 1913

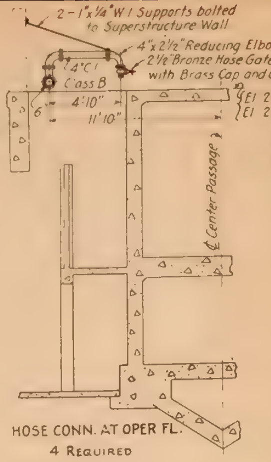
SHEET NO. 1 OF 38

Drawing No 30-A 3


Extended Stem through floor with shank for head Thus for all Drain valves
E 224.5
Concrete supports as required
Pipe pitched to drain this way
Special 4"x 2½" Beams with 1-½" Bar supporting pipe, to be located as required
6" C I (Class B)
E 216.0
2" Drain Bronze Valve

6" PRESSURE LINE AT SOUTH END

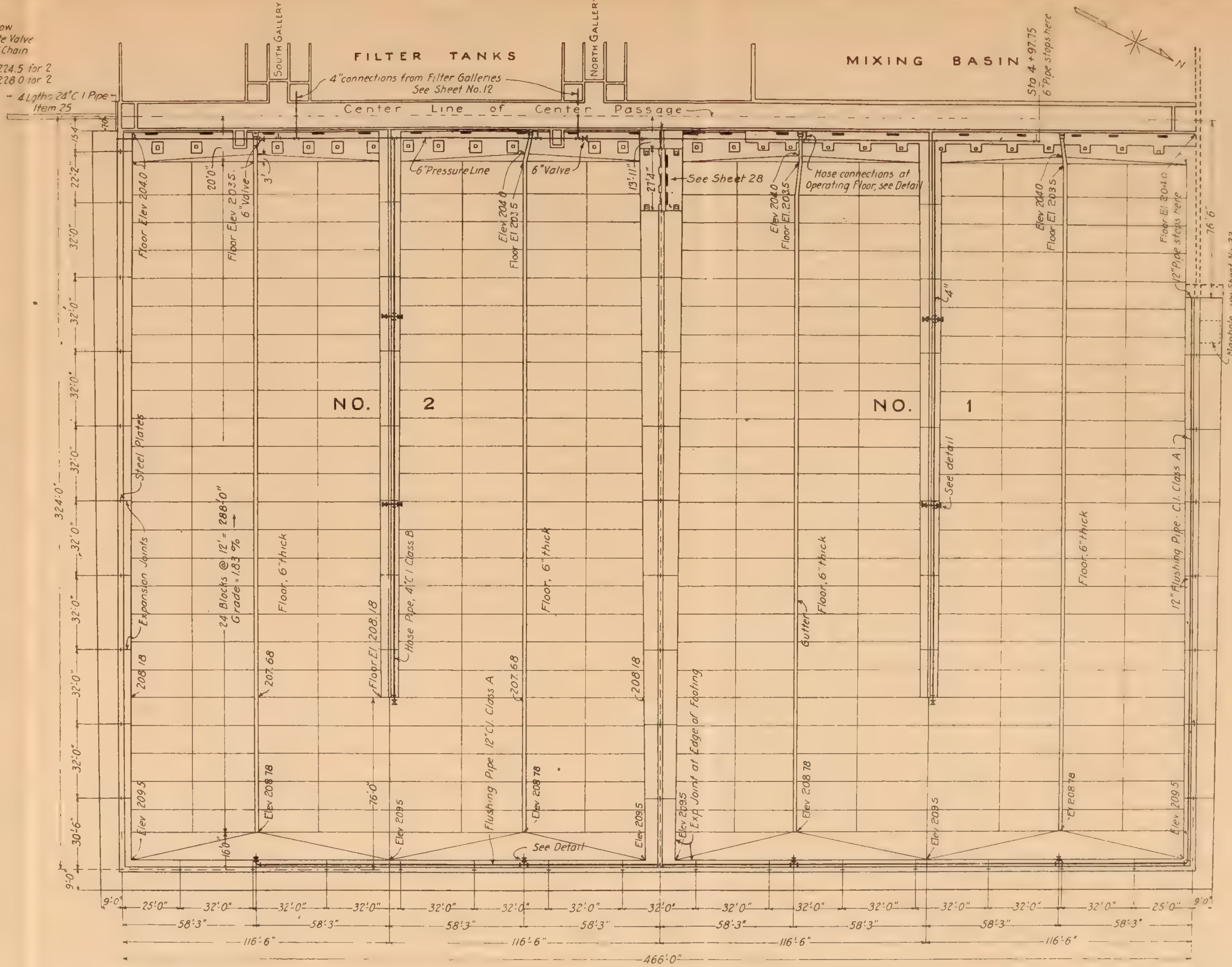
0 5 10 FT

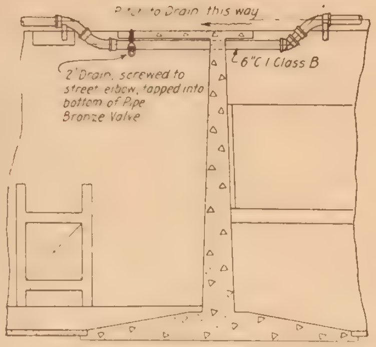

2 - 1"x ¼" W I Supports bolted to Superstructure Wall
4"x 2½" Reducing Elbow
2½" Bronze Hose Gate Valve with Brass Cap and Chain
4" C I Class B
6
4'10"
11'10"
El 224.5 for 2
El 228.0 for 2
℄ Center Passage

HOSE CONN. AT OPER FL.

4 REQUIRED

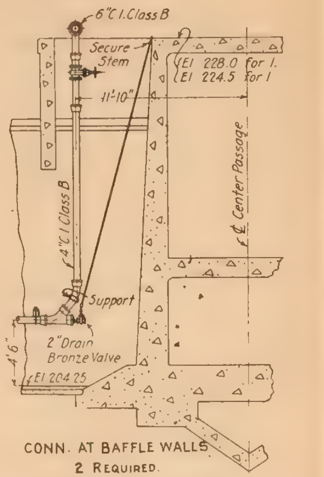
0 5 10 FT


FILTER TANKS
SOUTH GALLERY
NORTH GALLERY
MIXING BASIN
N
Sta 4 + 97.75
6" Pipe stops here
4" connections from Filter Galleries See Sheet No. 12
4 Lgths 24" C I Pipe Item 25
Center Line of Center Passage
6" Pressure Line
6" Valve
See Sheet 28
Hose connections at Operating Floor, see Detail
Floor Elev 204.0
Floor Elev 203.5
Elev 204.0
Floor El 203.5
Floor El 204.0
12" Pipe stops here
Manhole see Sheet No. 33
NO. 2
NO. 1
Steel Plates
Expansion Joints
24 Blocks @ 12' = 288'-0"
Grade 1.83 %
Floor, 6" thick
Hose Pipe, 4" C I Class B
Flushing Pipe 12" C.I. Class A
12" Flushing Pipe C.I. Class A
See detail
Gutter
Exp. Joint at Edge of Footing
Floor El 208.18
208.18
207.68
Elev 208.78
Elev 209.5
See Detail
20'0"
3'
13'11"
27'4"
4"
76'6"
22'-2"
32'-0"
324'-0"
30'-6"
16'-0"
9'-0"
25'-0"
32'-0"
58'-3"
116'-6"
466'-0"
76'-0"


Pitch to Drain this way
2" Drain, screwed to street elbow, tapped into bottom of Pipe Bronze Valve
6" C I Class B

6" PRESSURE LINE AT DIVISION WALL.

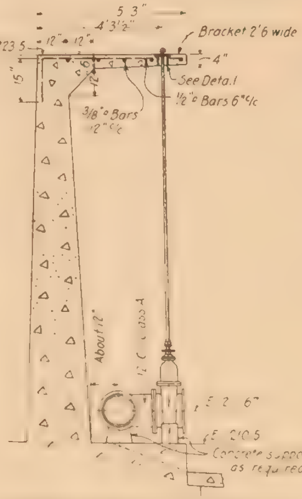
0 5 10 FT


6" C.I. Class B
Secure Stem
El 228.0 for 1.
El 224.5 for 1
11'-10"
℄ Center Passage
4" C I Class B
Support
2" Drain Bronze Valve
4'6"
El 204.25

CONN. AT BAFFLE WALLS

2 REQUIRED.

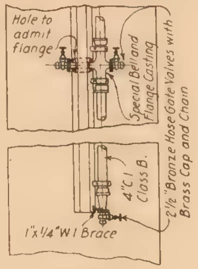
0 5 10 FT


5'3"
4'3½"
El 223.5
12" 12"
Bracket 2'6 wide
4"
15"
6
12
See Detail
½" ⌀ Bars 6" c/c
3/8" ⌀ Bars 12" c/c
About 12"
12" C I Class A
El 210.5
Concrete supports as required

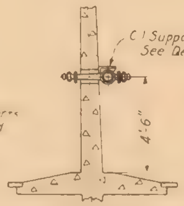
DETAILS AT VALVES - 12" FLUSHING PIPE

4 REQUIRED

0 5 FT


Hole to admit flange
Special Bell and Flange Casting
2½" Bronze Hose Gate Valves with Brass Cap and Chain
4" C I Class B.
1"x ¼" W I Brace

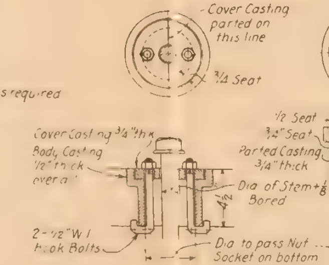
PLAN.


C I Supports as required See Detail
4'-6"

SECTION

4" HOSE LINE ON BAFFLE WALLS

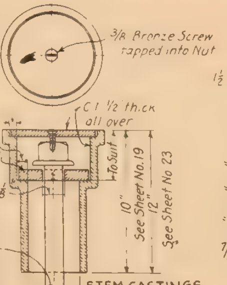
0 5 FT


Cover Casting parted on this line
¾ Seat
Cover Casting ¾" thick
Body Casting ½" thick overall
Dia of Stem + ⅛ Bored
4½
2 - ½" W I Hook Bolts
Dia to pass Nut Socket on bottom of Stem

STEM CASTING - 12" FLUSHING VALVE

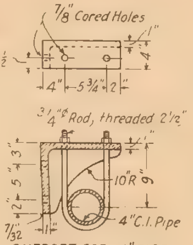
4 REQUIRED

0 3 6 9 12 IN


3/8 Bronze Screw tapped into Nut
C I ½ thick all over
½ Seat
¾" Seat
Parted Casting ¾" thick
To Suit
10" See Sheet No. 19
12" See Sheet No 23

STEM CASTINGS DRAIN VALVES

2 REQUIRED


⅞" Cored Holes
1"
4"
1½
4" 5¾" 2"
¾" ⌀ Rod, threaded 2½"
3"
5"
2"
9"
10" R
4" C.I. Pipe
7/32
1"

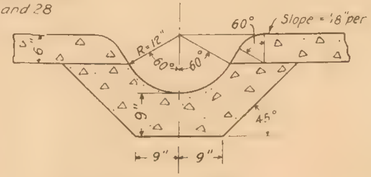
SUPPORT FOR 4" PIPE.

0 3 6 9 12 IN

For Detail of Floor Joint, see Sheet No 7
For Wall Details, see Sheets 27 and 28

Brackets to be spaced not more than 12 ft c/c

Bracket to be secured to wall with 2 - ⅝" ⌀ × 8" bronze bolts, placed with templet before concrete is poured


60°
Slope = ⅛" per ft. (Approx)
6
R = 12"
60° 60°
9"
45°
9" 9"

SECTION OF GUTTER

0 1 2 FT

BALTIMORE CITY WATER DEPARTMENT
FILTRATION DIVISION
CONTRACT NO. 11
FILTERS, BASINS & GRADING
PLAN OF COAGULATING BASINS
APRIL 2 1913
0 20 40 FT
SHEET NO 26 OF 38

James W. Armstrong
ENGINEER, FILTRATION DIV.

WATER ENGINEER

DRAWN H. A. H. & B.
TRACED H. A. H.
CHECKED

Drawing No 55-A

At the middle point of the mixing basin two 72x72-inch gates are provided to take the water into the intermediate passage of the center conduits, as shown in Section C-42 of Drawing No. 58-A-3, and this intermediate passage delivers the water into the coagulating basins. This will be the ordinary course of the water through the mixing basin at times when the water is turbid.

When the raw water is comparatively clear and a small amount of chemical is being used it is not anticipated that it will be necessary to pass the water through the coagulating basins, but it can be passed through the baffles in the mixing chamber and then through the lower half of this chamber around the wooden baffle, as shown on Drawing No. 61-A-3—on the "Key Plan of the Wooden Baffles and Strut." The water will then be drawn out of the mixing basin into the upper conduit of the center passage through two 72-inch gates, as shown on Section C-43 of Drawing No. 58-A-3, and in this upper passage it will be carried directly to the filters without passing through the coagulating basins.

The floor of the mixing basins is laid on a 0.66 per cent. grade, sloped toward the center passage. When the sludge from the chemicals is collected in the mixing basins to such an extent as to cut down the time of the passage of the water through the basin, this sludge may be removed by flushing it to the gutter along the center passage wall. This gutter along the center passage wall drains to four sumps, one of which is shown on Section C-44 of Drawing No. 58-A-3. Then by means of 18-inch sluice gates this sludge can be flushed into the main drain or the lower conduit of the center passage, which drain will carry the sludge to the wash water dam, which is shown on the General Location Plant Drawing No. 30-A-3.

Coagulating Basin.

The water enters the coagulating basins from the intermediate conduit of the center passage near the bottom of the coagulating basins through five 48x48-inch sluice gates. The advantage of having five of the gates is to distribute the flow as uniformly as possible across the entire width of the entrance-half of the coagulating basins. The general plan of these basins is shown on Drawing No. 55-A-3.

The water, after entering the basins, passes along the length of the basins and around the end of the concrete baffle wall and runs back to the center passage where it passes over a 4-inch skimmering wier and is drawn off into the upper conduit of the center passage by means of five 54x54-inch sluice gates.

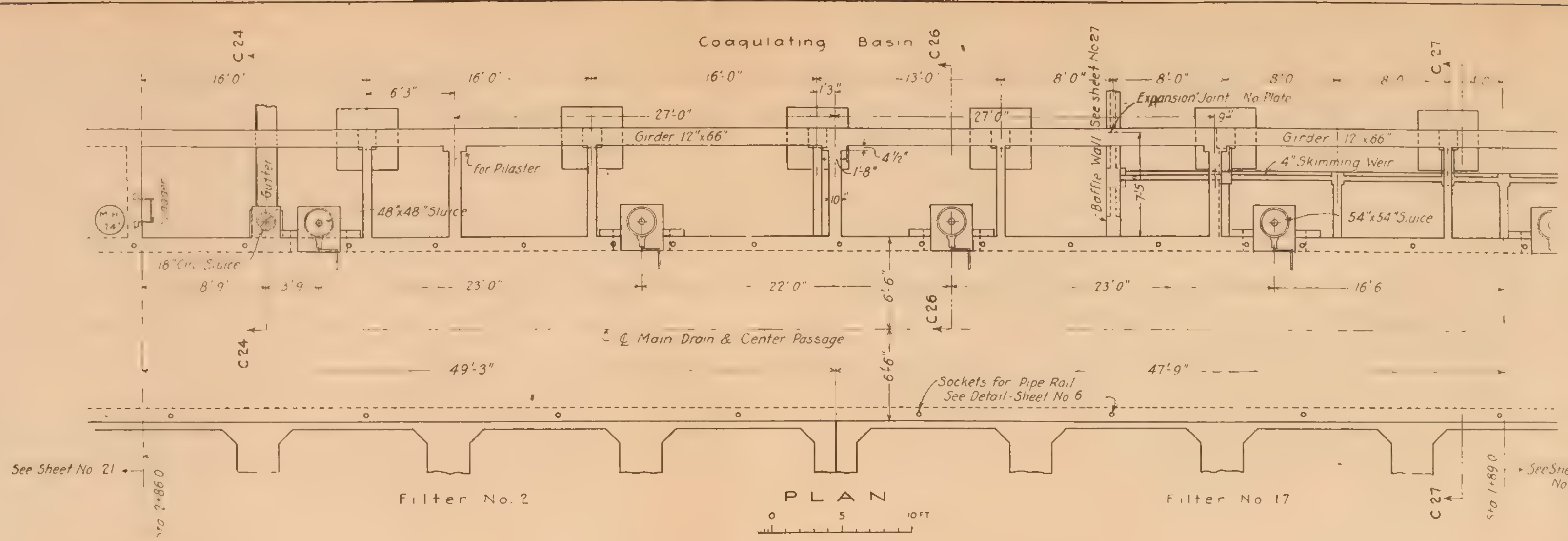
The location of the inlet opening in the center passage wall is shown in Section C-26 of Drawing No. 49-A-3, while the outlet openings in the center passage walls into the upper conduit are shown on Section C-12 of Drawing No. 51-A-3.

The coagulating basins, as can be seen from the General Plan on Drawing No. 55-A-3, are practically divided into two compartments by the reinforced concrete baffle wall passing down the center of the basin from the center passage, dividing each one of these two basins in half.

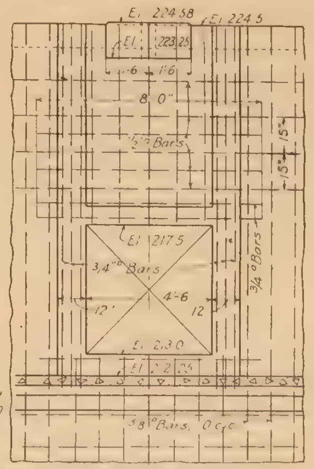
There are gutters which slope toward the center passage, and the floors are so laid that they slope to these gutters from all directions. When the coagulating basins become so filled with sludge that it becomes necessary to clean them, the water is drained from them. At the wall near the upper end of these gutters a 12-inch gate valve is located which carries raw water from the head house before the chemical is added to the point at the upper end of the gutters. The 12-inch gate valves above mentioned are then opened and the raw water flowing from this gate valve is used to carry the deposited sludge down the gutter and into the main drain under the center passage through the 18-inch sluice gate built in a sump at the end of the gutter, as shown on Section C-16, Drawing No. 53-A-3, and also on the same sheet on the horizontal section marked "18-inch Drain from Coagulating Basin No. 2."

In order to flush the sludge to this main gutter, hose connections are provided from 4-inch cast-iron water pipes, which are connected with the regular city mains under a pressure of about forty pounds. The details of this flushing water system are shown on Drawing No. 55-A-3.

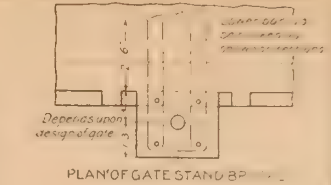
Three 60x72-inch sluice gates are provided in the division wall between the two coagulating basins at a point near the center passage, as shown on Drawing No. 58-A-3. The two coagulating basins can be used in series if it is found desirable to operate them in that way by opening these three sluice gates. The time of passage of water through each one of the coagulating basins, based on the rated capacity of 128 million gallons for the plant, is approximately one and one-half hours, and with the two coagulating basins in use, either in series or parallel, it would therefore require three hours for the passage of the water through them.


Coagulating Basin
C 24
C 26
C 27
16'0"
6'3"
16'0"
16'0"
13'0"
8'0"
8'0"
8'0"
1'3"
27'0"
27'0"
Girder 12"x66"
Girder 12"x66"
Expansion Joint No Plate
Baffle Wall See sheet No 27
4" Skimming Weir
For Pilaster
Gutter
48"x48" Sluice
54"x54" Sluice
18" Cir. Sluice
4½"
1'8"
10"
7'5"
8'9"
3'9"
23'0"
22'0"
23'0"
16'6
6'6"
6'6"
℄ Main Drain & Center Passage
49'3"
47'9"
Sockets for Pipe Rail
See Detail Sheet No 6
See Sheet No 21
To 2+86.0
To 1+89.0
See Sheet No 19
Filter No. 2
Filter No 17
0
5
10 FT

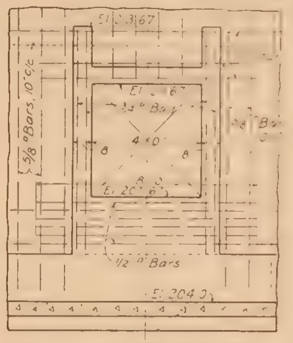
PLAN


El 224.58
El 224.5
El 223.25
6
1'6
8'0"
5/8" Bars
15"
15"
El 217.5
3/4" Bars
3/4" Bars
4'6
12
12
El 213.0
El 212.25
5/8" Bars 10" c/c

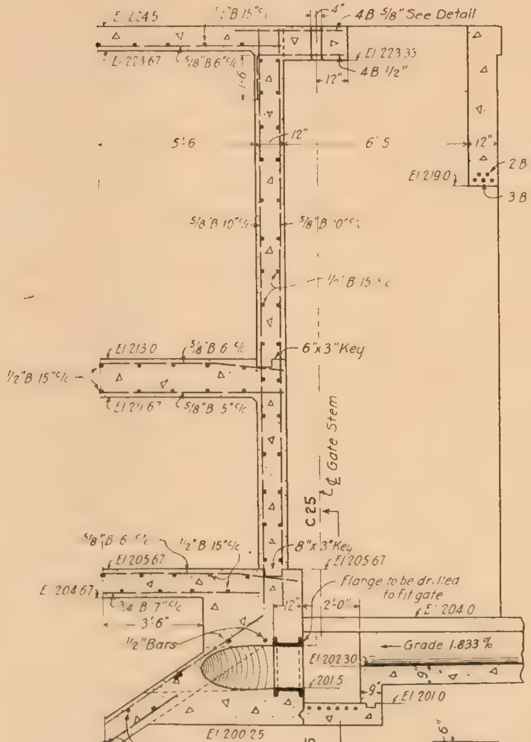
TYPICAL OUTLET GATE, COAGULATING BASIN, OPPOSITE FILTERS


Depends upon design of gate

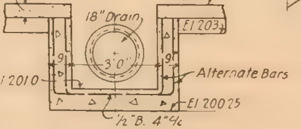
PLAN OF GATE STAND 8P


El 213.67
5/8" Bars 10" c/c
3/4" Bars
4'0"
8
8
El 206.0
½" Bars
El 204.0

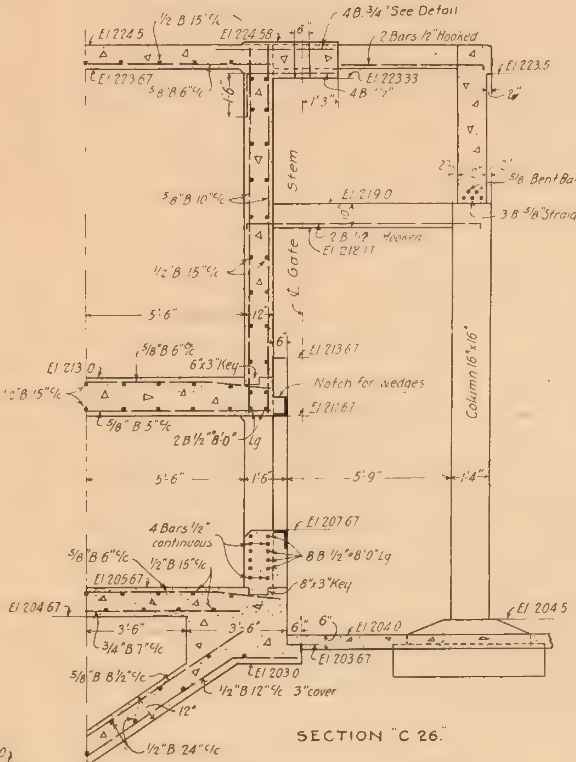
TYPICAL INLET GATE, COAGULATING BASIN, OPPOSITE FILTERS


El 224.5
½"B 15" c/c
4"
4B 5/8" See Detail
El 223.33
El 223.67
5/8"B 6" c/c
12"
4B ½"
5'6
12"
6'5
12"
2B 5/8" Bent
El 219.0
3B 5/8" Str
5/8"B 10" c/c
5/8"B 10" c/c
½"B 15" c/c
El 213.0
5/8"B 6" c/c
6"x3" Key
½"B 15" c/c
El 211.67
5/8"B 5" c/c
℄ Gate Stem
C 25
5/8"B 6" c/c
½"B 15" c/c
El 205.67
8"x3" Key
El 205.67
El 204.67
3/4"B 7" c/c
3'6"
½" Bars
12"
2'0"
Flange to be drilled to fit gate
El 204.0
Grade 1.833%
El 202.30
201.5
9"
El 201.0
El 200.25
½" Bars 24" c/c
C 25

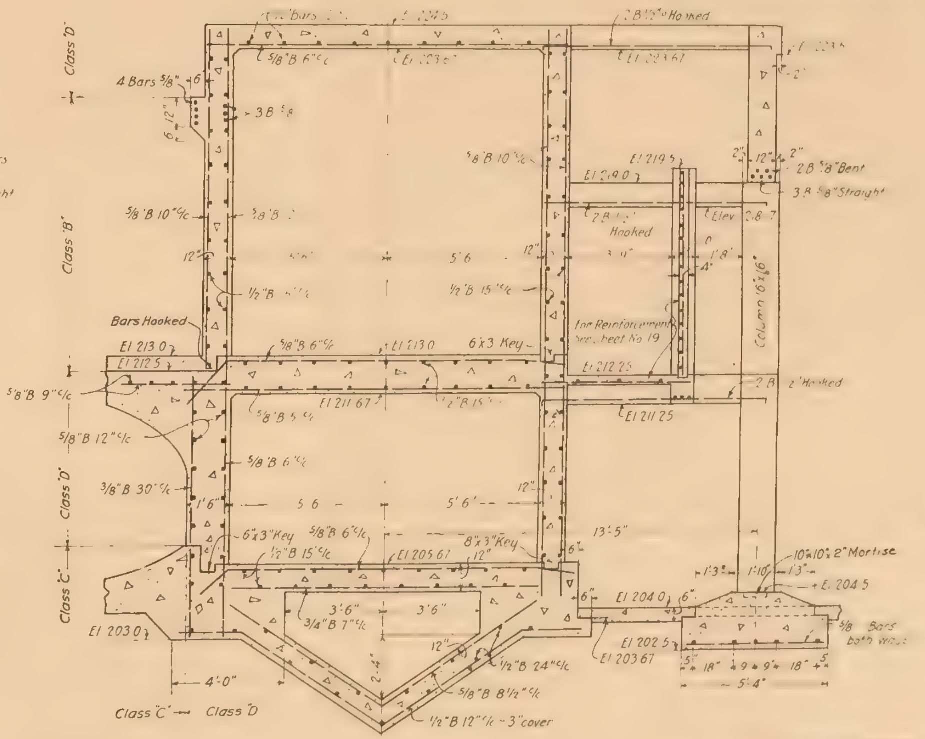
SECTION "C 24"


6"
El 204.0
18" Drain
El 203.0
3'0"
9
9
El 201.0
Alternate Bars
El 200.25
½"B 4" c/c

SECTION "C 25"


El 224.5
½"B 15" c/c
El 224.58
6"
4B 3/4" See Detail
2 Bars ½" Hooked
El 223.5
El 223.67
5/8"B 6" c/c
El 223.33
4B ½"
1'3"
Stem
2"
5/8 Bent Bars
5/8"B 10" c/c
El 219.0
3B 5/8" Straight
2B ½" Hooked
El 218.17
℄ Gate
½"B 15" c/c
5'6"
12"
6"
El 213.67
5/8"B 6" c/c
6"x3" Key
El 213.0
½"B 15" c/c
Notch for wedges
El 211.67
5/8"B 5" c/c
2B ½" 8'0" Lg
Column 16"x16"
5'6"
1'6"
5'9"
1'4"
4 Bars ½" continuous
El 207.67
8B ½" 8'0" Lg
5/8"B 6" c/c
½"B 15" c/c
El 205.67
8"x3" Key
El 204.67
3'6"
3'6"
6"
6"
El 204.0
El 204.5
3/4"B 7" c/c
El 203.0
El 203.67
5/8"B 8½" c/c
½"B 12" c/c 3" cover
12"
½"B 24" c/c

SECTION "C 26."


Class "D"
Class "B"
Class "D"
Class "C"
4 Bars 5/8"
6
3B 5/8
5/8"B 6" c/c
5/8"B 10" c/c
5/8"B 10" c/c
3/8"B
12"
½"B
Bars Hooked
El 213.0
El 212.5
5/8"B 9" c/c
5/8"B 12" c/c
5/8"B 6" c/c
3/8"B 30" c/c
1'6"
6"x3" Key
½"B 15" c/c
5/8"B 6" c/c
5/8"B 5" c/c
El 211.67
6"x3 Key
El 213.0
5'6
12"
½"B 15" c/c
5 6
5'6"
8"x3" Key
El 205.67
12"
El 203.0
3'6"
3'6"
3/4"B 7" c/c
12"
2'4"
4'0"
½"B 24" c/c
5/8"B 8½" c/c
½"B 12" c/c - 3" cover
Class "C"
Class "D"
2B ½" Hooked
El 223.61
2B 5/8" Bent
3B 5/8" Straight
El 219.5
El 219.0
2B ½" Hooked
Elev 218.7
1'8"
4"
For Reinforcement see Sheet No 19
Column 16"x16"
El 212.25
2B ½" Hooked
El 211.25
13'5"
6"
El 204.0
El 202.5
El 203.67
10"x10"x2" Mortise
1'3"
1'10"
El 204.5
5/8 Bars both ways
18"
9
9
18"
5'4"

SECTION "C 27"

0 5 10 FT

Note - All sizes of Steel refer to Square, Twisted Bars
All steel to have 2" cover, except as noted
Each Coagulating Basin Column to be reinforced with 4 - 5/8" Bars
For Elevation of Main Drain, see Sheet No. 25
For Details of Anchorage for Gate Stands, see Sheet No 9
For Steady Bearings, see Sheets Nos 9 and 25

James W. Armstrong
ENGINEER, FILTRATION DIV.

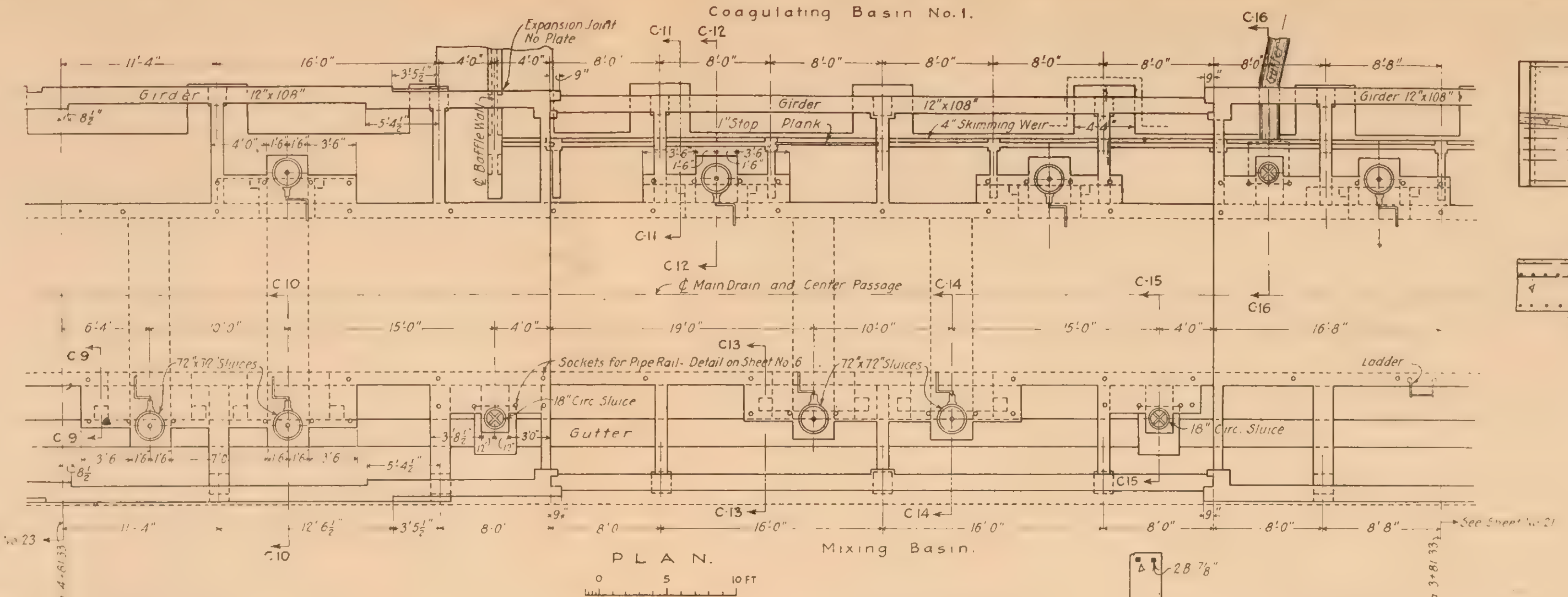
Ezra B. Whitman
WATER ENGINEER

BALTIMORE CITY WATER DEPARTMENT
FILTRATION DIVISION
CONTRACT NO 11
FILTERS, BASINS & GRADING
PLAN & DETAILS OF CENTER PASSAGE
STATIONS 1+89 TO 2+86.
APRIL 2 1913
SCALES AS NOTED

SHEET NO 20 OF 38

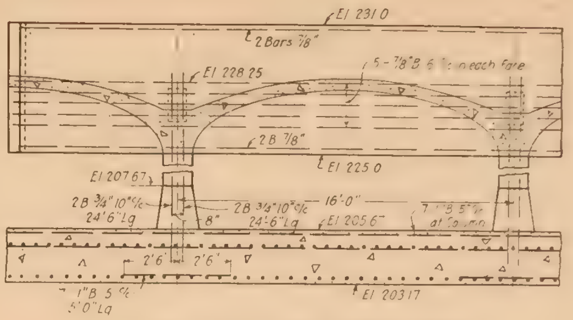
Drawing No 29-4-3

DRAWN R. G. P.
TRACED E. H. E.
CHECKED



Coagulating Basin No.1.
Expansion Joint No Plate
Girder 12"x108"
Baffle Wall
1" Stop Plank
4" Skimming Weir
C.11
C.12
C.13
C.14
C.15
C.16
C.9
C.10
Main Drain and Center Passage
Sockets for Pipe Rail - Detail on Sheet No. 6
72"x72" Sluices
18" Circ. Sluice
Gutter
Ladder
See Sheet No. 23
See Sheet No. 21
Sta 4+81.33
Sta 3+81.33
Mixing Basin.
0
5
10 FT

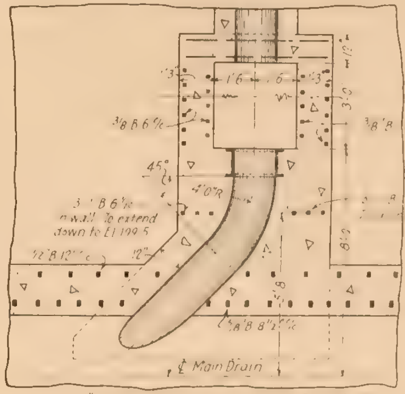
PLAN.



El 231.0
2 Bars 7/8"
El 228.25
5 - 7/8" B 6" c/c each face
2 B 7/8"
El 225.0
El 207.67
2 B 3/4" 10" c/c 24'6" Lg
16'0"
El 205.6"
El 203.17
1" B 5" c/c 5'0" Lg

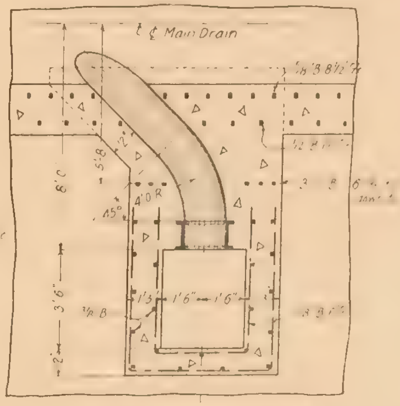
TYPICAL MIXING BASIN GIRDER & FOOTING
(SHOWN FOR STA 3+98 TO STA 4+22)

0
5
10 FT



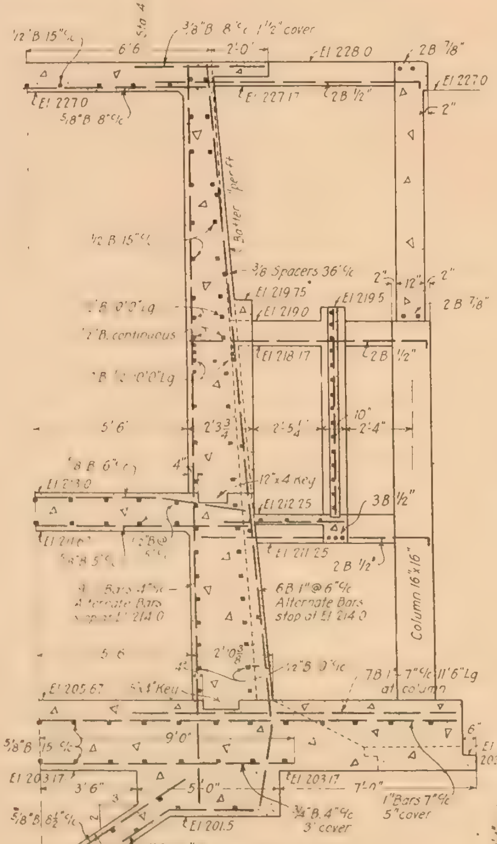
3/8" B 6" c/c
45°
4'0" R
Main Drain

18" DRAIN FROM COAGULATING BASIN No. 1



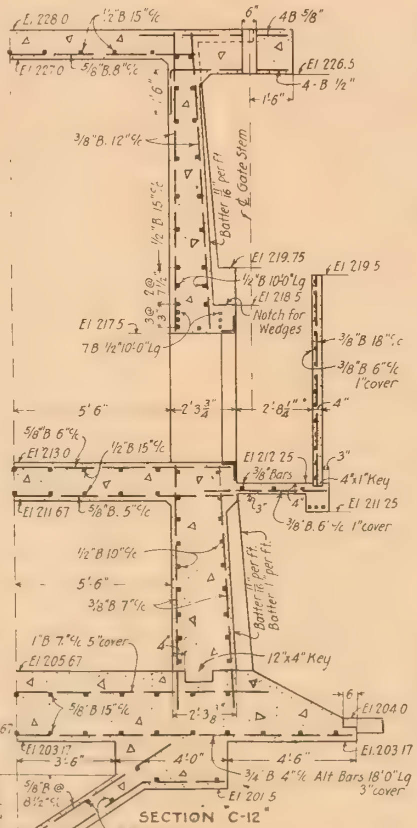
Main Drain
45°
4'0" R
1'6"

18" DRAIN FROM MIXING BASIN.



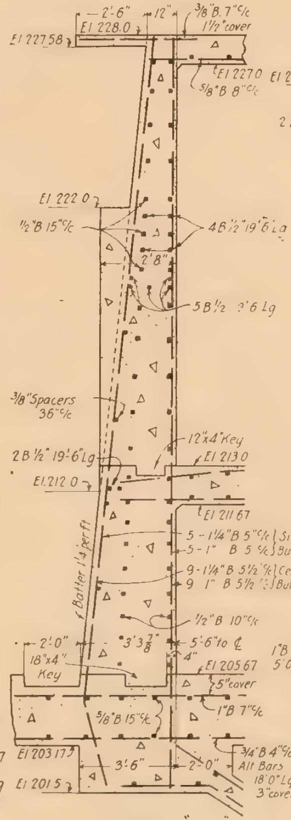
El 228.0
El 227.0
2 B 7/8"
Batter 1" per ft
3/8" Spacers 36" c/c
El 219.75
El 219.0
El 218.17
El 213.0
12"x4" Key
El 212.25
El 211.25
6 B 1" @ 6" c/c Alternate Bars stop at El 214.0
Column 16"x16"
El 205.67
El 203.17
El 201.5
1/2" B 12" c/c

SECTION "C-11"



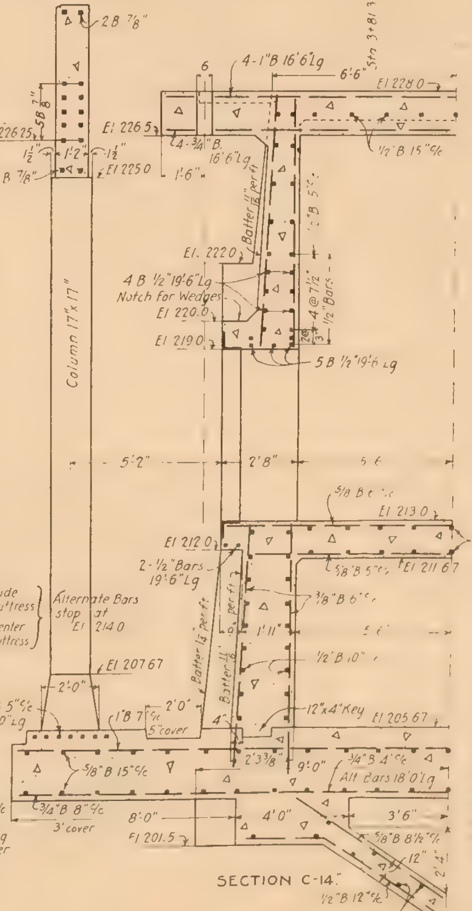
El 228.0
El 227.0
4 B 5/8"
El 226.5
Batter 1/6" per ft
Gate Stem
El 219.75
El 219.5
Notch for Wedges
El 217.5
El 213.0
El 212.25
4"x1" Key
El 211.25
El 211.67
12"x4" Key
El 205.67
El 204.0
El 203.17
El 201.5
3/4" B 4" c/c Alt Bars 18'0" Lg 3" cover
1/2" B 24" c/c
1/2" B 12" c/c

SECTION "C-12"



El 227.58
El 228.0
El 227.0
El 222.0
4 B 1/2" 19'6" Lg
5 B 1/2" 9'6" Lg
3/8" Spacers 36" c/c
12"x4" Key
El 213.0
El 212.0
El 211.67
Batter 1 1/4" per ft
El 205.67
El 203.17
El 201.5

SECTION "C-13".



2 B 7/8"
Column 17"x17"
Alternate Bars stop at El 214.0
El 207.67
El 228.0
El 226.5
El 225.0
4-1" B 16'6" Lg
Notch for Wedges
El 222.0
El 220.0
El 219.0
5 B 1/2" 19'6" Lg
El 213.0
El 212.0
El 211.67
12"x4" Key
El 205.67
El 201.5
1/2" B 12" c/c
1/2" B 24" c/c

SECTION "C-14".

0
5
10 FT

Note
All sizes of Steel refer to Square Twisted Bars
All steel to have 2" cover, except as noted.
Each Coagulating Basin Column to be reinforced with 4 - 5/8" Bars
For Elevation of Main Drain, see Sheet No 25
For Details of Anchorage for Gate Stands, see Sheet No 9
For Steady Bearings, See Sheets Nos 9 & 25

BALTIMORE CITY WATER DEPARTMENT
FILTRATION DIVISION
CONTRACT NO 11
FILTERS, BASINS & GRADING
PLAN & DETAILS OF CENTER PASSAGE
STATIONS 3+81.33 TO 4+81.33

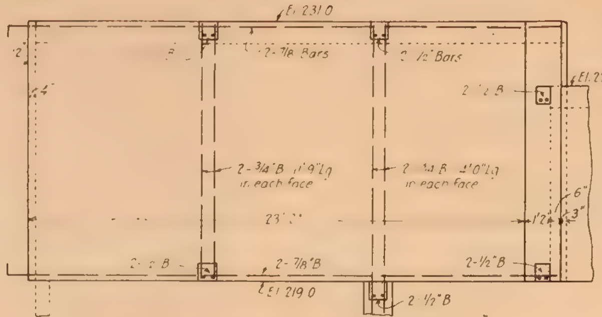
SCALES AS NOTED.

SHEET NO [illegible] OF 38

DRAWN
TRACED J.J.
CHECKED

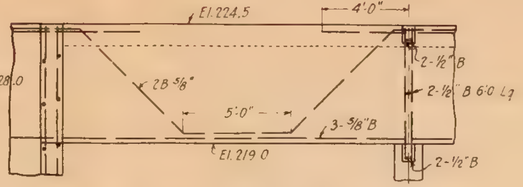
James W. Armstrong
ENGINEER, FILTRATION DIV.

WATER ENGINEER



El. 231.0
2-7/8" Bars
2-1/2" Bars
El. 228.0
2-3/4"B 11'9" Lg in each face
2-3/4"B 4'0" Lg in each face
23'-2"
2-7/8"B
2-1/2"B
El. 219.0
2-1/2"B

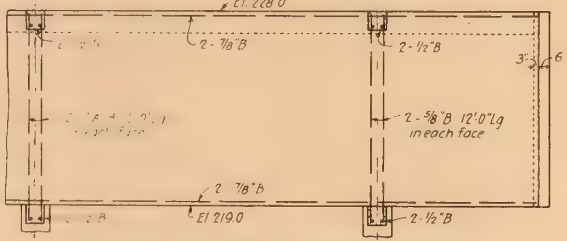
GIRDER AT NORTH END OF COAGULATING BASINS



El. 224.5
4'-0"
2-1/2"B
2B 5/8"
2-1/2"B 6'0" Lg
5'-0"
3-5/8"B
El. 219.0
2-1/2"B

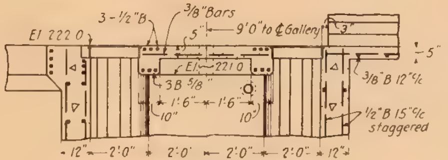
TYPICAL 12"x66" GIRDER – COAGULATING BASINS
(SHOWN FOR STA 1+33.50 TO STA. 1+49.50)

0 5 10 FT



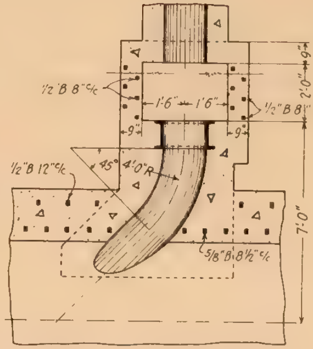
El. 228.0
2-7/8"B
2-1/2"B
3"
6
2-5/8"B 12'0" Lg in each face
2-7/8"B
El. 219.0
2-1/2"B

TYPICAL 12"x108" GIRDER – COAGULATING BASINS.
(SHOWN FOR STA. 3+98 TO STA 4+22.)



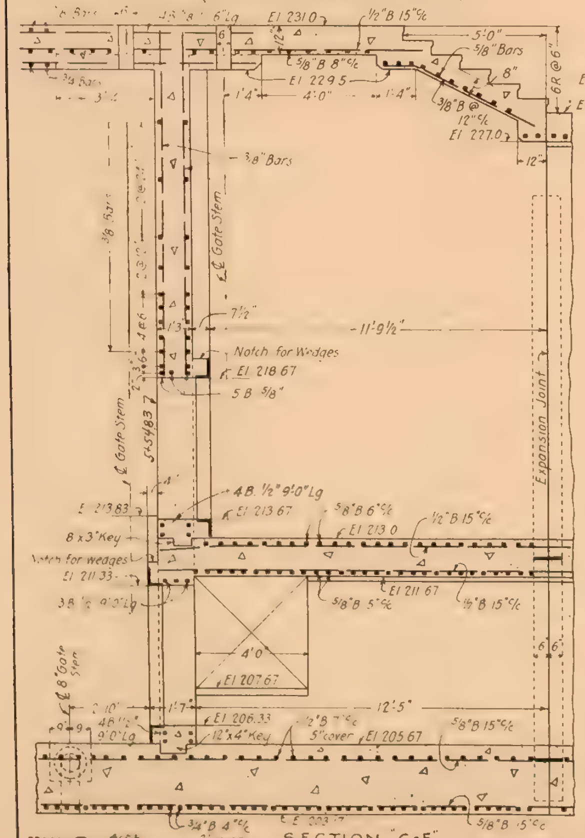
3-1/2"B
3/8" Bars
9'0" to ℄ Gallery
El. 222.0
El. 221.0
3B 5/8"
1'-6"
10"
3/8"B 12"c/c
1/2"B 15"c/c staggered
12"
2'-0"

SECTION "C-18"



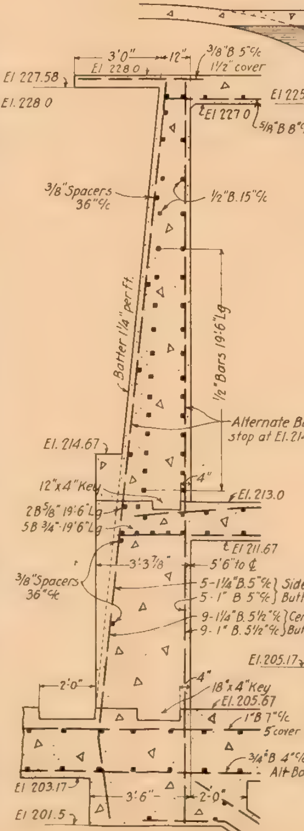
1/2"B 8"c/c
1'-6"
2'-0"
1/2"B 8"c/c
1/2"B 12"c/c
45°
4'0"R
5/8"B 8 1/2"c/c
7'-0"

18" DRAIN FROM COAGULATING BASIN NO. 2



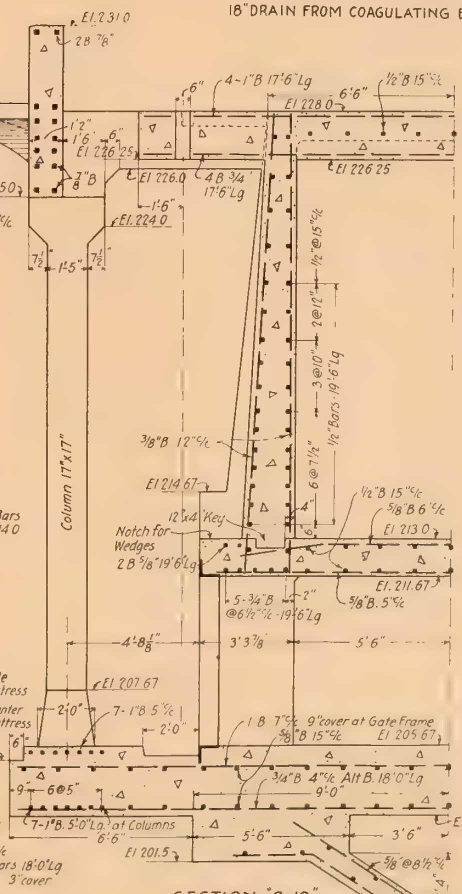
El. 231.0
1/2"B 15"c/c
5'-0"
5/8"B 8"c/c
5/8" Bars
El. 229.5
4'-0"
3/8"B @ 12"c/c
El. 227.0
El. 228.0
6R @ 6"
3/8" Bars
℄ Gate Stem
11'-9 1/2"
Notch for Wedges
El. 218.67
5B 5/8"
Expansion Joint
℄ Gate Stem
5+54.83
4B 1/2" 9'0" Lg
El. 213.83
El. 213.67
5/8"B 6"c/c
El. 213.0
1/2"B 15"c/c
8x3" Key
Notch for wedges
El. 211.33
El. 211.67
5/8"B 5"c/c
1/2"B 15"c/c
4'0"
El. 207.67
℄ 8" Gate Stem
El. 206.33
12'-5"
12"x4" Key
5" cover
El. 205.67
5/8"B 15"c/c
3/4"B 4"c/c 3" cover
El. 203.17
5/8"B 15"c/c

SECTION "C-5"



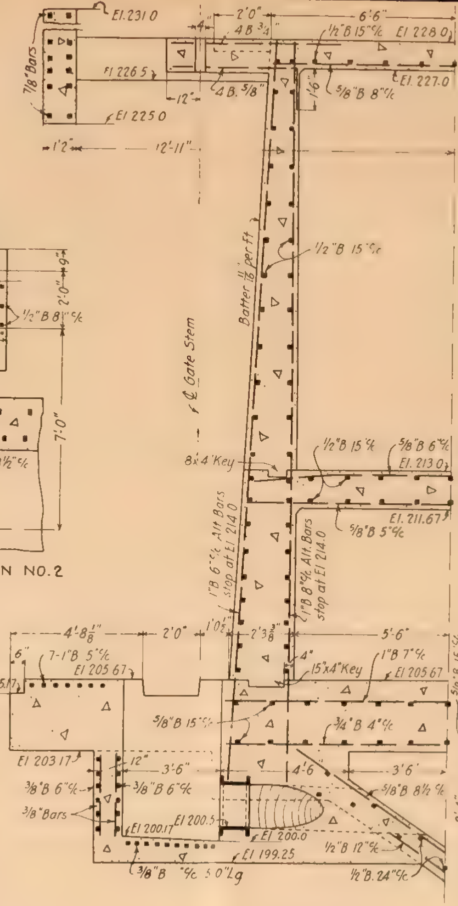
3'0"
3/8"B 5"c/c 1 1/2" cover
El. 227.58
El. 228.0
El. 227.0
5/8"B 8"c/c
3/8" Spacers 36"c/c
1/2"B 15"c/c
Batter 1 1/4" per ft.
1/2" Bars 19'6" Lg
Alternate Bars stop at El. 214.0
El. 214.67
12"x4" Key
El. 213.0
2B 5/8" 19'6" Lg
5B 3/4" 19'6" Lg
El. 211.67
3'3 7/8"
5'6" to ℄
5-1 1/4"B 5"c/c Side
5-1"B 5"c/c Buttress
9-1 1/4"B 5 1/2"c/c Center
9-1"B 5 1/2"c/c Buttress
3/8" Spacers 36"c/c
18"x4" Key
El. 205.67
1"B 7"c/c 5" cover
3/4"B 4"c/c Alt Bars 18'0" Lg 3" cover
2'-0"
El. 203.17
El. 201.5
3'6"

SECTION "C-9"



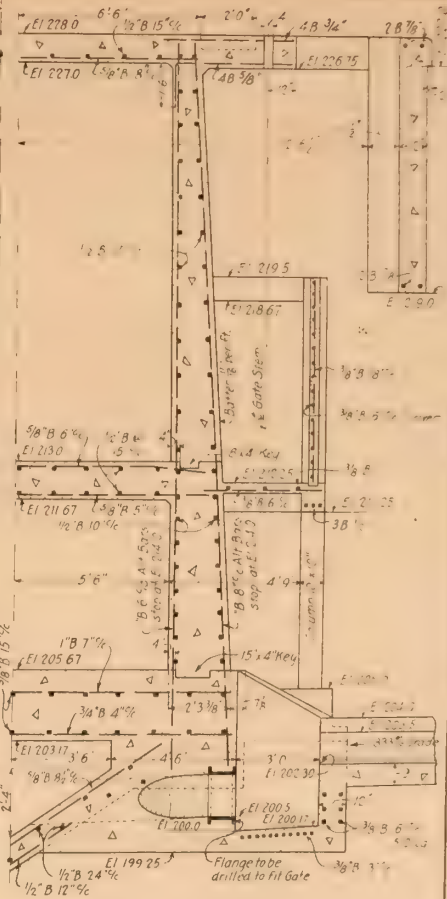
El. 231.0
2B 7/8"
4-1"B 17'6" Lg
6'-6"
1/2"B 15"c/c
El. 228.0
El. 226.25
El. 225.0
El. 226.0
4B 3/4" 17'6" Lg
El. 224.0
1'-5"
Column 17"x17"
1/2"B @ 15"c/c
2@12"
3@10"
6@7 1/2"
1/2" Bars 19'6" Lg
3/8"B 12"c/c
El. 214.67
12"x4" Key
Notch for Wedges
2B 5/8" 19'6" Lg
1/2"B 15"c/c
5/8"B 6"c/c
El. 213.0
El. 211.67
5-3/4"B @6 1/2"c/c 19'6" Lg
5/8"B 5"c/c
4'-8 1/2"
3'3 7/8"
5'-6"
El. 207.67
7-1"B 5"c/c
1"B 7"c/c 9" cover at Gate Frame
5/8"B 15"c/c
El. 205.67
El. 205.17
6@5
3/4"B 4"c/c Alt B. 18'0" Lg
9'-0"
7-1"B 5'0" Lg at Columns
El. 201.5
5'-6"
3'6"
El. 203.17
5/8"@8 1/2"c/c
1/2"B 12"c/c
1/2"B 24"c/c

SECTION "C-10."



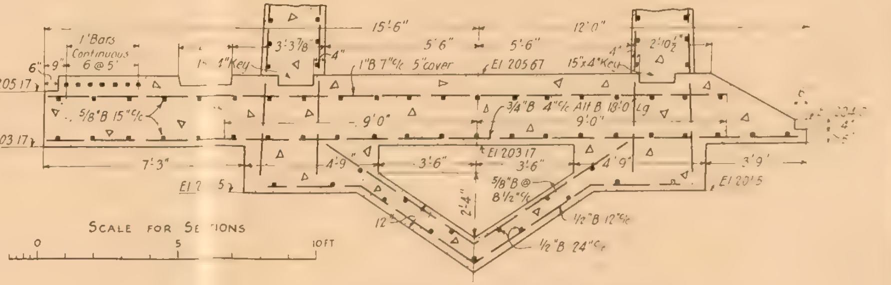
El. 231.0
2'0"
4B 3/4"
6'6"
1/2"B 15"c/c
El. 228.0
7/8" Bars
El. 226.5
4B 5/8"
5/8"B 8"c/c
El. 227.0
El. 225.0
12'-11"
℄ Gate Stem
Batter 1 1/8" per ft.
1/2"B 15"c/c
8x4 Key
1/2"B 15"c/c
5/8"B 6"c/c
El. 213.0
El. 211.67
5/8"B 5"c/c
1"B 6"c/c Alt Bars stop at El. 214.0
1"B 8"c/c Alt Bars stop at El. 214.0
4'-8 1/8"
2'0"
7-1"B 5"c/c
El. 205.67
El. 205.17
5'-6"
15"x4" Key
1"B 7"c/c
El. 205.67
5/8"B 15"c/c
3/4"B 4"c/c
El. 203.17
3'-6"
3/8"B 6"c/c
3/8" Bars
4'6"
3'6"
5/8"B 8 1/2"c/c
El. 200.17
El. 200.5
El. 200.0
El. 199.25
1/2"B 12"c/c
3/8"B 6"c/c 5'0" Lg
1/2"B 24"c/c

SECTION "C-15."



El. 228.0
6'6"
1/2"B 15"c/c
2'0"
4B 3/4"
El. 226.75
El. 227.0
5/8"B 8"c/c
4B 5/8"
El. 219.5
El. 218.67
Batter 1 1/8" per ft.
℄ Gate Stem
5/8"B 6"c/c
El. 213.0
8x4 Key
El. 211.67
5/8"B 5"c/c
1/2"B 10"c/c
5'6"
1"B 8"c/c Alt Bars stop at El. 214.0
4'-9"
El. 205.67
1"B 7"c/c
15"x4" Key
3/4"B 4"c/c
2'3 3/8"
El. 203.17
3'6"
4'-6"
5/8"B 8 1/2"c/c
El. 200.0
El. 199.25
El. 200.5
El. 200.17
El. 200.30
1/2"B 24"c/c
1/2"B 12"c/c
Flange to be drilled to fit Gate

SECTION "C-16".



15'-6"
12'0"
1" Bars Continuous 6@5"
3'3 7/8"
1" Key
5'6"
5'6"
2'0 1/2"
1"B 7"c/c 5" cover
El. 205.67
15"x4" Key
El. 205.17
5/8"B 15"c/c
9'0"
3/4"B 4"c/c Alt B. 18'0" Lg
9'0"
El. 203.17
7'3"
4'-9
3'-6"
4'9"
3'9"
El. 203.17
5/8"B @ 8 1/2"c/c
El. 201.5
1/2"B 12"c/c
1/2"B 24"c/c
SCALE FOR SECTIONS
0 5 10 FT

FOOTING FOR STANDARD WALL AT MIXING BASIN

LOOKING NORTH

Note - All sizc of Steel refer to Square, Twisted Bars
All stee have 2" cover, except as noted
Each Co ilating Basin Column to be reinforced
with 4 - ars 5/8"
For Ele n of Main Drain see Sheet No 25
For Det of Anchorage for Gate Stands,
see She No. 9
For Ste / Bearing, see Sheets Nos 9 & 25

BALTIMORE CITY WATER DEPARTMENT
FILTRATION DIVISION
CONTRACT NO 11.
FILTERS, BASINS & GRADING
MISCELLANEOUS DETAILS
CENTER PASSAGE
APRIL 2 1913
SCALES AS NOTED

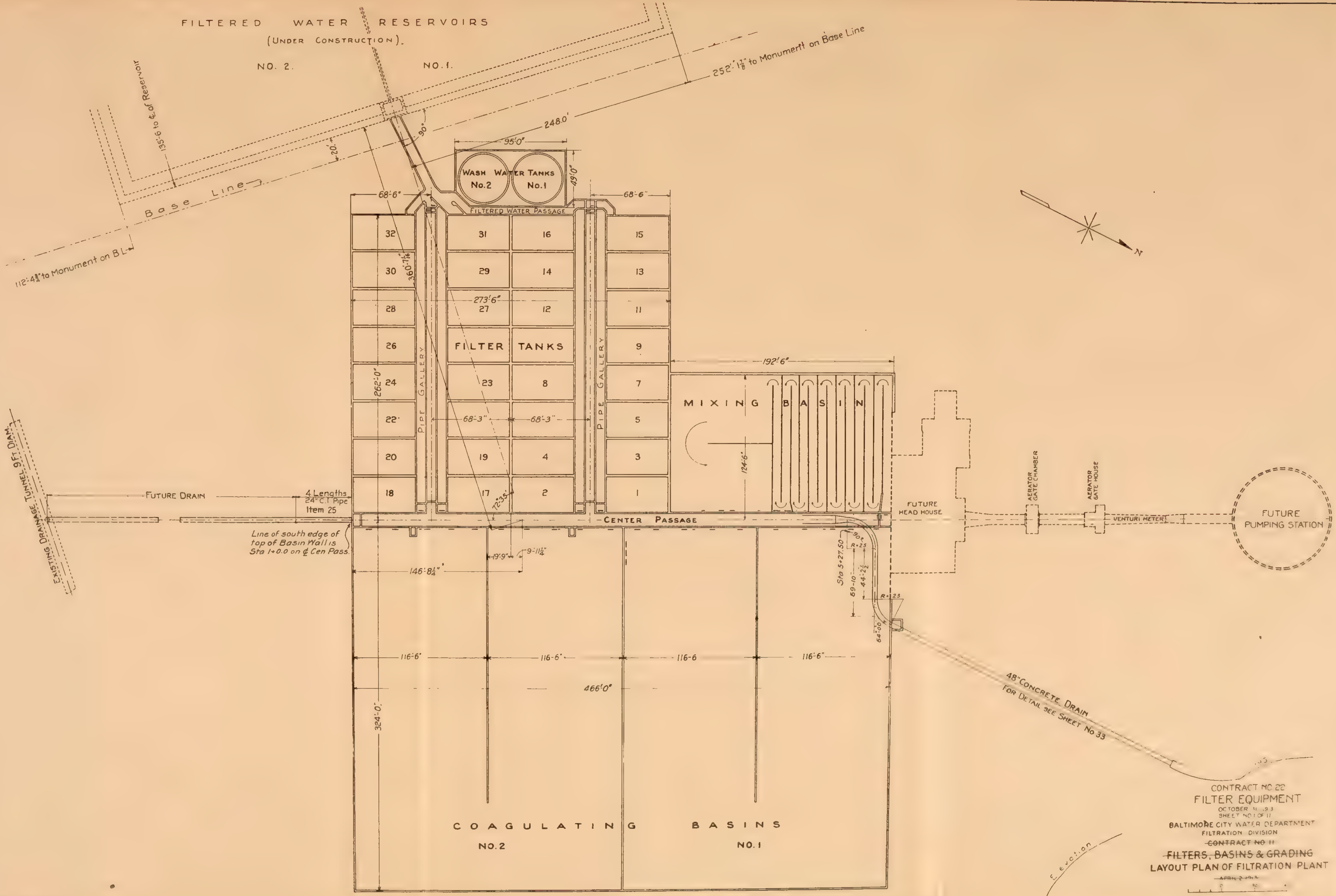
SHEET NO 24 OF 38

Geo B Whitman
WATER ENGINEER

James W. Armstrong
ENGINEER, FILTRATION DIV.

DRAWN
TRACED
CHECKED

Drawing No 53-4-3


FILTERED WATER RESERVOIRS
(UNDER CONSTRUCTION).
NO. 2.
NO. 1.
252' 1 7/8" to Monument on Base Line
248.0'
135'-6" to ℄ of Reservoir
20'
90°
Base Line
112'-4 3/4" to Monument on B L
95'-0"
WASH WATER TANKS
No. 2
No. 1
49'-0"
68'-6"
68'-6"
FILTERED WATER PASSAGE
32
31
16
15
30
29
14
13
360'-7 1/16"
273'-6"
28
27
12
11
26
FILTER TANKS
9
24
23
8
7
22
5
20
19
4
3
18
17
2
1
262'-0"
PIPE GALLERY
PIPE GALLERY
68'-3"
68'-3"
72°35'
192'-6"
MIXING BASIN
124'-6"
FUTURE HEAD HOUSE
AERATOR GATE CHAMBER
AERATOR GATE HOUSE
VENTURI METER
FUTURE PUMPING STATION
N
EXISTING DRAINAGE TUNNEL, 9 FT. DIAM.
FUTURE DRAIN
4 Lengths 24" C.I. Pipe Item 25
CENTER PASSAGE
Line of south edge of top of Basin Wall is Sta 1+0.0 on ℄ Cen Pass.
146'-8 1/4"
19'-9"
9'-11 1/4"
Sta 5+27.50
90°
R=25
59'-10"
44'-2 1/2"
R=25
64'-0"
48" CONCRETE DRAIN
FOR DETAIL SEE SHEET No 33
116'-6"
116'-6"
116'-6
116'-6"
466'-0"
324'-0"
COAGULATING BASINS
NO. 2
NO. 1
Elevation
35

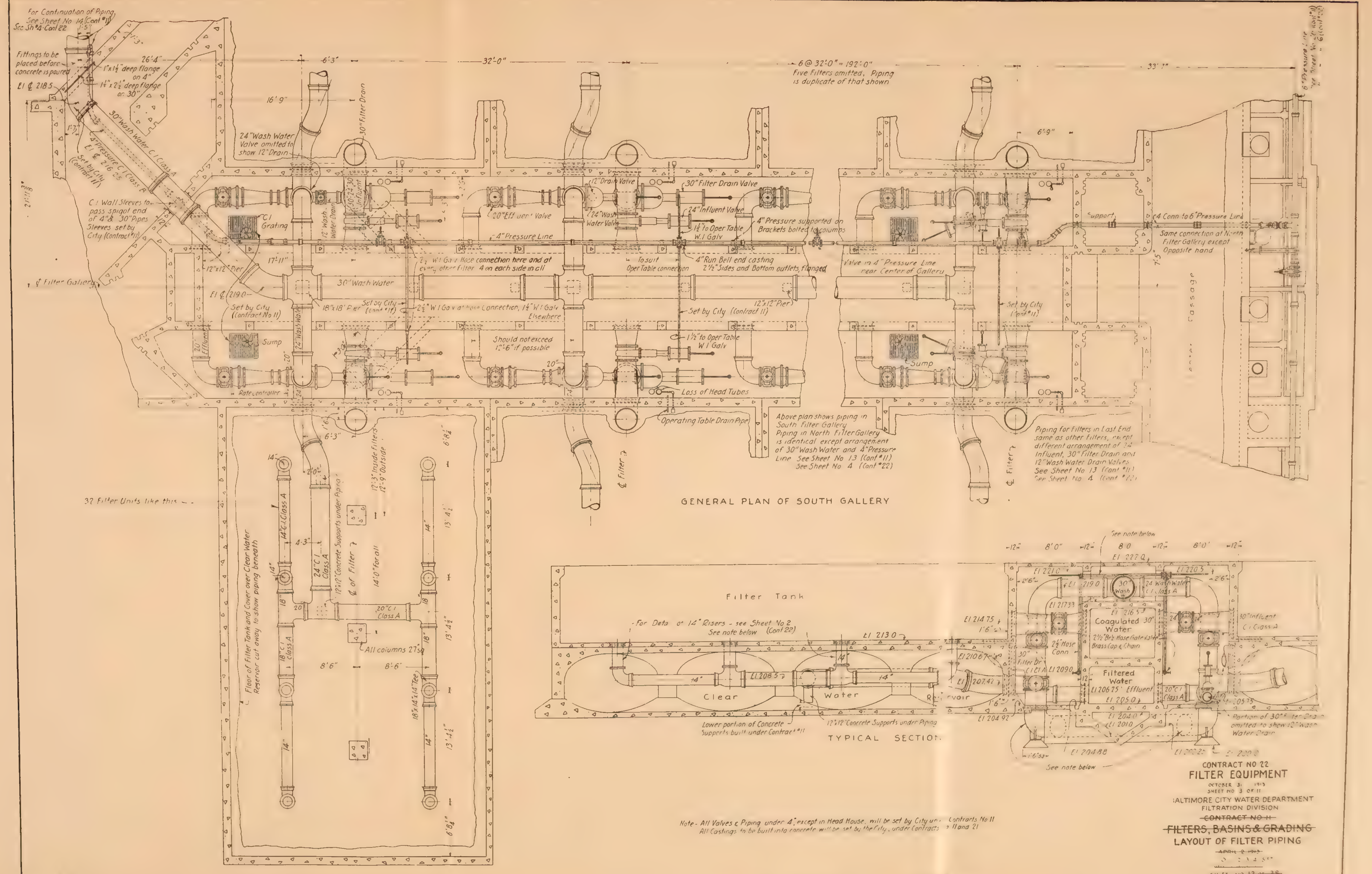
CONTRACT NO. 22
FILTER EQUIPMENT
OCTOBER 31 1913
SHEET NO. 1 OF 11
BALTIMORE CITY WATER DEPARTMENT
FILTRATION DIVISION
~~CONTRACT NO 11~~
~~FILTERS, BASINS & GRADING~~
LAYOUT PLAN OF FILTRATION PLANT
~~APRIL 2 1912~~
0 50
~~SHEET NO 2 OF 38~~

Drawing No 3 4 3

DRAWN H & H
TRACED F.F. + H & H.
CHECKED F.F.

James W. Armstrong
ENGINEER, FILTRATION DIV.

WATER ENGINEER


For Continuation of Piping See Sheet No 14 (Cont #11)
See Sh #4 Cont 22
1'-5"
1'-3"
Fittings to be placed before concrete is poured
26'-4"
1"x1½" deep flange on 4"
1½"x2½" deep flange on 30"
El ℄ 218.5
1'-7"
30" Wash Water C I Class A
4" Pressure C I Class A
El ℄ 216.25
Set by City (Contract 11)
21'-11⅜"
C I Wall Sleeves to pass spigot end of 4" & 30" Pipes Sleeves set by City (Contract #11)
12"
℄ Filter Gallery
12"x12" Pier
El ℄ 219.0
Set by City (Contract No 11)
Sump
20" Effluent
24" Wash Water
20"
Rate controller
24
6'-3"
16'-9"
24" Wash Water Valve omitted to show 12" Drain
30" Filter Drain
30" 24" 30" Influent
12" Wash Water Drain
C I Grating
17'-11"
30" Wash Water
18"x18" Pier
Set by City (Cont #11)
2½" W I Galv Hose connection here and at every other filter 4 on each side in all
2½" W I Galv at Hose Connection, 1½" W I Galv Elsewhere
3'-0"
32'-0"
2'-3"
4'-3"
20" Effluent Valve
12" Drain Valve
24" Wash Water Valve
30" Filter Drain Valve
24" Influent Valve
1½" to Oper Table W.I Galv
4" Pressure Line
4" Pressure supported on Brackets bolted to columns
To suit Oper Table connection
4" Run Bell end casting 2½" Sides and Bottom outlets, flanged
12"x12" Pier
Set by City (Contract 11)
Should not exceed 12'-6" if possible
1½" to Oper Table W I Galv
Loss of Head Tubes
Operating Table Drain Pipe
℄ Filter
6 @ 32'-0" = 192'-0"
Five Filters omitted, Piping is duplicate of that shown
33'-7"
6'-9"
Valve in 4" Pressure Line near Center of Gallery
Set by City (Cont #11)
Sump
Support
4 Conn to 6" Pressure Line
Same connection at North Filter Gallery except Opposite hand
7'-5"
Passage
6" Pressure Line See Sheet No 21 (Cont #11) " " 6 (Cont #22)
℄ Filter
14"
14" C.I. Class A
2'-0"
4'-3"
24" C I Class A
12"x12" Concrete Supports under Piping
℄ of Filter
12'-3" Inside Filters 12'-9" Outside
14'-0" for all
6'-8¼"
13'-4½"
14"
18"
20
20" C I Class A
18" C I Class A
All columns 27" sq
8'-6"
8'-6"
18"x14"x14" Tee
Floor of Filter Tank and Cover over Clear Water Reservoir cut away to show piping beneath
Filter Tank
For Detail of 14" Risers - see Sheet No 2 See note below (Cont 22)
El 213.0
El 208.5
14"
Clear Water Reservoir
Lower portion of Concrete Supports built under Contract #11
12"x12" Concrete Supports under Piping
See note below
12"
8'-0"
8'-0"
El 222.0
El 221.0
El 220.5
2'-6"
El 219.0
30" Wash
24" Wash Water C I Class A
El 217.33
El 216.5
Coagulated Water
30"
2½" Br'z Hose Gate Valve Brass Cap & Chain
2½" Hose Conn
30" Influent C I Class A
El 214.75
1'-6"
El 210.67
30" Filter Dr C I Cl A
El 209.0
Filtered Water
El 206.25 Effluent
El 205.0
20" C I Class A
El 207.42
El 205.75
El 204.92
El 204.0
El 201.0
El 204.88
1'-6" sq
El 202.25
El 200.0
Portion of 30" Filter Drain omitted to show 12" Wash Water Drain

32 Filter Units like this

Above plan shows piping in South Filter Gallery
Piping in North Filter Gallery is identical except arrangement of 30" Wash Water and 4" Pressure Line See Sheet No 13 (Cont #11)
See Sheet No 4 (Cont #22)

Piping for Filters in East End same as other Filters, except different arrangement of 24" Influent, 30" Filter Drain and 12" Wash Water Drain Valves
See Sheet No 13 (Cont #11)
See Sheet No 4 (Cont #22)

GENERAL PLAN OF SOUTH GALLERY

TYPICAL SECTION

Note - All Valves & Piping under 4", except in Head House, will be set by City under Contracts No 11
All Castings to be built into concrete will be set by the City, under Contracts No 11 and 21

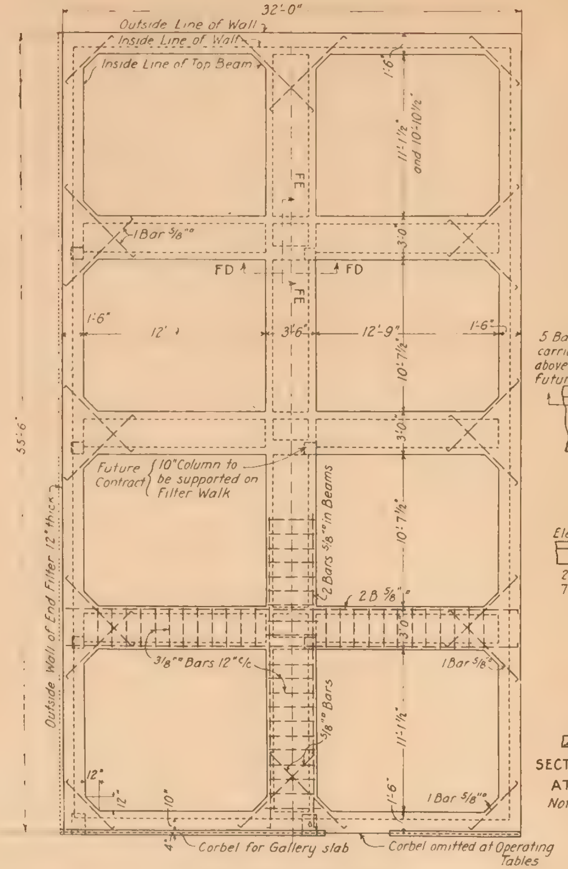
CONTRACT NO 22
FILTER EQUIPMENT
OCTOBER 31 1913
SHEET NO 3 OF 11
BALTIMORE CITY WATER DEPARTMENT
FILTRATION DIVISION
~~CONTRACT NO 11~~
~~FILTERS, BASINS & GRADING~~
LAYOUT OF FILTER PIPING
~~APRIL 2 1913~~
~~SHEET NO 12 OF 38~~

DRAWN S. S.
TRACED S. S.
CHECKED

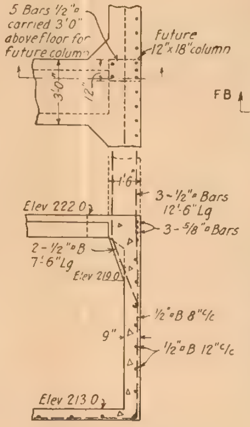
James W. Armstrong
ENGINEER, FILTRATION DIV

Wm Whitman
WATER ENGINEER

Drawing No 4 4 5

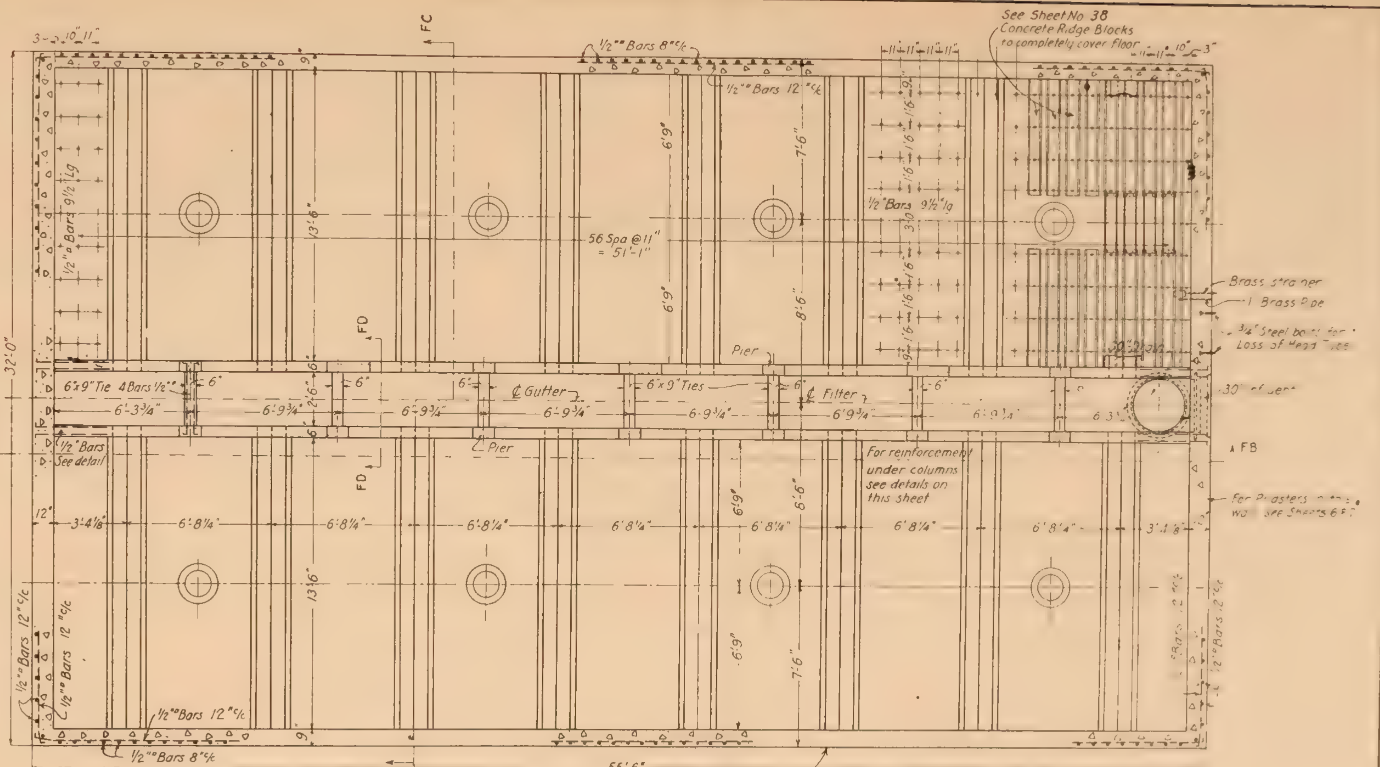

32'-0"
Outside Line of Wall
Inside Line of Wall
Inside Line of Top Beam
11'-1½" and 10'-10½"
1 Bar ⅝"ø
FD
FE
1'-6"
12'
3'6"
12'-9"
10'-7½"
3'-0"
Future Contract
10" Column to be supported on Filter Walk
2 Bars ⅝"ø in Beams
2 B ⅝"ø
⅜"ø Bars 12"c/c
1 Bar ⅝"ø
⅝"ø Bars
11'-1½"
1 Bar ⅝"ø
12"
10"
55'-6"
Outside Wall of End Filter 12" thick
Corbel for Gallery slab
Corbel omitted at Operating Tables

TOP PLAN OF FILTERS

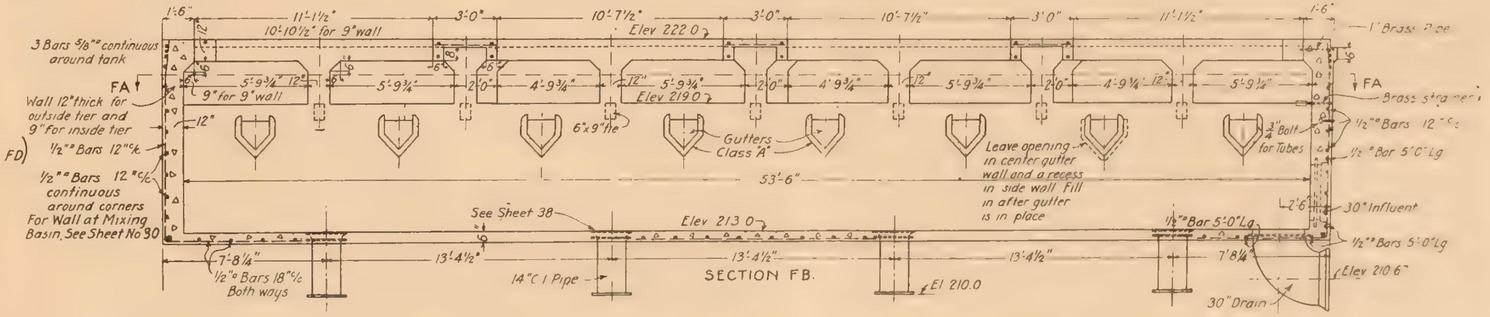

5 Bars ½"ø carried 3'0" above Floor for future column
Future 12"x18" column
3-½"ø Bars 12'-6" Lg
3-⅝"ø Bars
Elev 222.0
2-½"ø B 7'-6" Lg
Elev 219.0
½"ø B 8"c/c
½"ø B 12"c/c
9"
Elev 213.0

SECTION SHOWING REINF'M'T. AT TRANSEPT COLUMN.

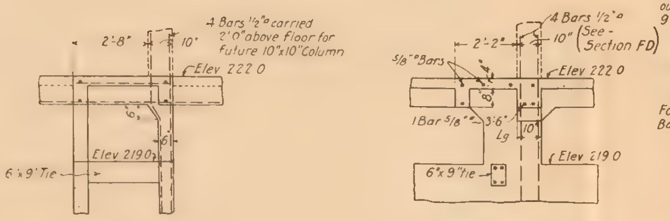
Note: This occurs 3 times on each of four filters.


See Sheet No 38
Concrete Ridge Blocks to completely cover Floor
FC
½"ø Bars 8"c/c
½"ø Bars 12"c/c
½"ø Bars 9½" Lg
56 Spa @ 11" = 51'-1"
13'-6"
6'9"
7'-6"
8'-6"
32'-0"
Brass strainer
1 Brass Pipe
¾" Steel bolts for Loss of Head Tubes
30" Influent
Pier
6"x9" Tie 4 Bars ½"ø
6'-3¾"
6'-9¾"
℄ Gutter
6"x9" Ties
℄ Filter
½"ø Bars See detail
FB
FD
For reinforcement under columns see details on this sheet
For Plasters on wall see Sheets 6 & 7
3'-4⅛"
6'-8¼"
3'-4⅛"
½"ø Bars 12"c/c
½"ø Bars 8"c/c
55'-6"
For Wall along Center Passage, see Sheets 19, 20 & 21

SECTIONAL PLAN FA.
SHOWING TYPICAL OUTER ROW


1'-6"
11'-1½"
10'-10½" for 9" wall
3'-0"
10'-7½"
Elev 222.0
3 Bars ⅝"ø continuous around tank
FA
5'-9¾"
9" for 9" wall
4'-9¾"
2'-0"
Elev 219.0
1" Brass Pipe
Brass strainer
Wall 12" thick for outside tier and 9" for inside tier
½"ø Bars 12"c/c
6"x9" Tie
Gutters Class "A"
¾" Bolt for Tubes
½"ø Bar 5'-0" Lg
½"ø Bars 12"c/c continuous around corners
For Wall at Mixing Basin, See Sheet No 30
Leave opening in center gutter wall and a recess in side wall. Fill in after gutter is in place
53'-6"
2'-6"
30" Influent
See Sheet 38
Elev 213.0
½"ø Bars 5'-0" Lg
7'-8¼"
13'-4½"
½"ø Bars 18"c/c Both ways
14" C.I. Pipe
El 210.0
Elev 210.6
30" Drain

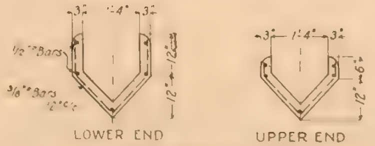
SECTION FB.


4 Bars ½"ø carried 2'0" above floor for future 10"x10" Column
2'-8"
10"
Elev 222.0
6"
Elev 219.0
6"x9" Tie
4 Bars ½"ø
2'-2"
10" (See Section FD)
⅝"ø Bars
8"
1 Bar ⅝"ø 3'-6" Lg
10"
Elev 219.0
6"x9" Tie

SECTION FD

SECTION FE

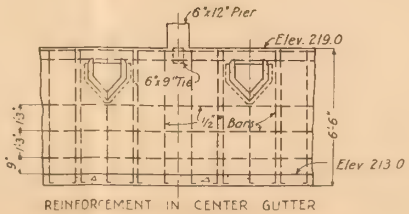
DETAILS OF WALK AT COLUMN


3"
1'-4"
3"
½"ø Bars
⅜"ø Bars 12"c/c
12"
1'-4"
12"
6"

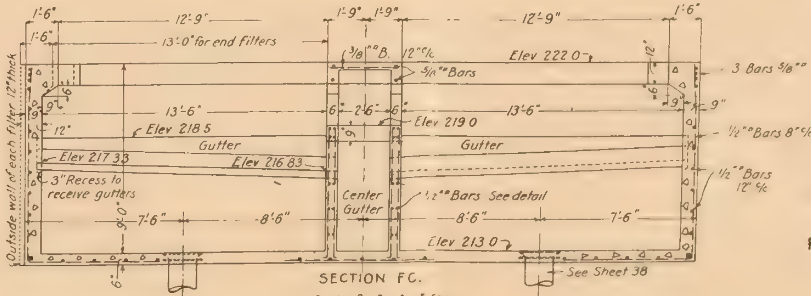
LOWER END

UPPER END

SECTIONS OF GUTTER


6"x12" Pier
Elev. 219.0
6"x9" Tie
½" Bars
6'-6"
Elev 213.0
9"
13"

REINFORCEMENT IN CENTER GUTTER


1'-6"
12'-9"
13'-0" for end filters
1'-9"
⅜"ø B.
12"c/c
⅝"ø Bars
Elev 222.0
3 Bars ⅝"ø
9"
13'-6"
2'-6"
Elev 219.0
½"ø Bars 8"c/c
12"
Elev 218.5
Gutter
Elev 217.33
Elev 216.83
3" Recess to receive gutters
Center Gutter
½"ø Bars See detail
½"ø Bars 12"c/c
7'-6"
8'-6"
Elev 213.0
See Sheet 38
Outside wall of each filter 12" thick

SECTION FC.

BALTIMORE CITY WATER DEPARTMENT
FILTRATION DIVISION
CONTRACT NO. 11
FILTERS, BASINS & GRADING
DETAILS OF FILTER TANK
APRIL 2 1913
SCALES AS NOTED

SHEET NO 8 OF 38

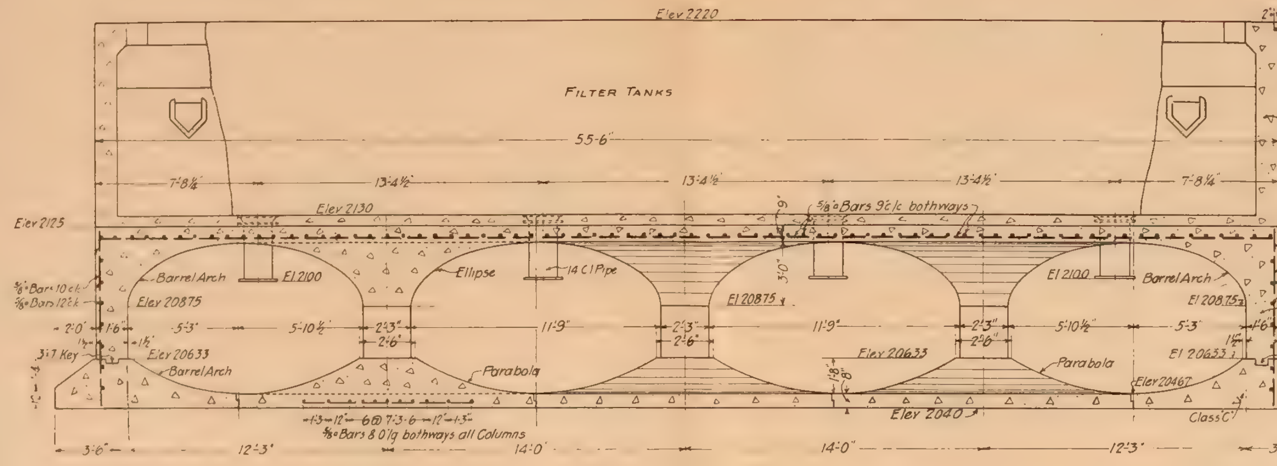
DRAWN V.B.C.
TRACED J.F.
CHECKED

James W. Armstrong
ENGINEER, FILTRATION DIV.

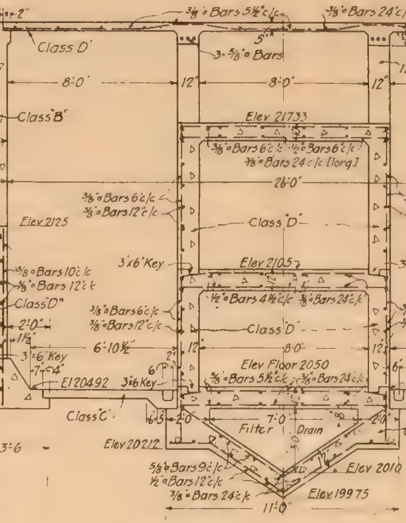
Geo. A. Whitman
WATER ENGINEER

Drawing No 3"4 3

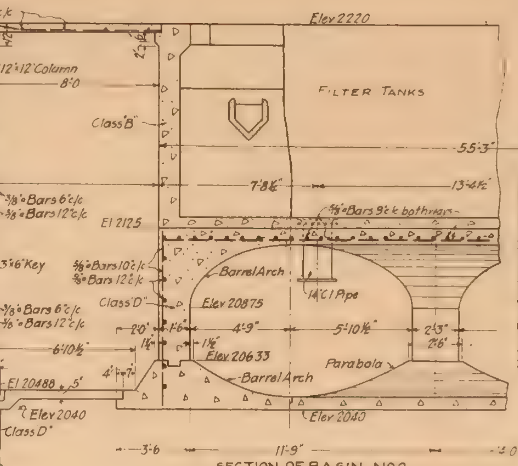
Note - Details of North and South Galleries are alike


Elev 2220
Filter Tanks
55-6"
7-8¼"
13-4½"
13-4½"
13-4½"
7-8¼"
Elev 2130
5/8" ø Bars 9"c/c bothways
Elev 2125
Barrel Arch
El 2100
14" C I Pipe
Ellipse
El 20875
Parabola
Elev 20633
Elev 20467
Elev 2040
3"x7" Key
5/8" ø Bars 8'-0" lg bothways all Columns
Class "C"
3-6"
12-3"
14-0"
14-0"
12-3"
3-6"

SECTION OF BASIN Nº3

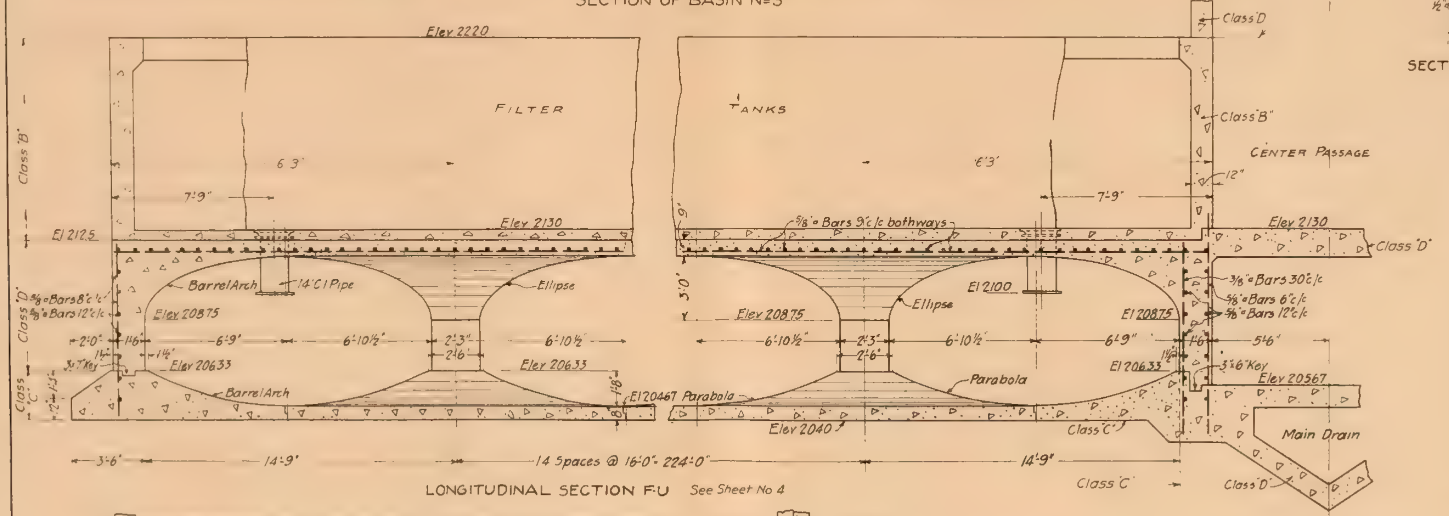

2"+2"
3/8" ø Bars 5½" c/c
5/8" ø Bars 24" c/c
Class "D"
Class "B"
8-0"
12"
3-5/8" ø Bars
12"x12" Column
Elev 21733
26-0"
Class "D"
Elev 21057
3"x6" Key
Class "D"
Elev Floor 2050
Filter Drain
7-0"
Elev 20212
Elev 2010
Elev 19975
11-0"
Class "C"
Class "D"
Elev 2040
El 20492
El 20488

SECTION OF SOUTH GALLERY

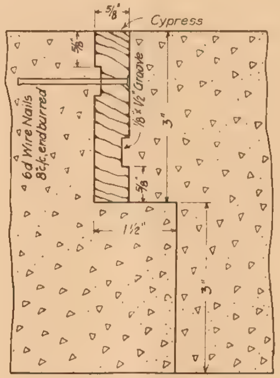

Elev 2220
Filter Tanks
55-3"
7-8¼"
13-4½"
5/8" ø Bars 9" c/c bothways
El 2125
Barrel Arch
14" C I Pipe
Elev 20875
Elev 20633
Parabola
Elev 2040
3-6"
11-9"
4-0"

SECTION OF BASIN Nº2

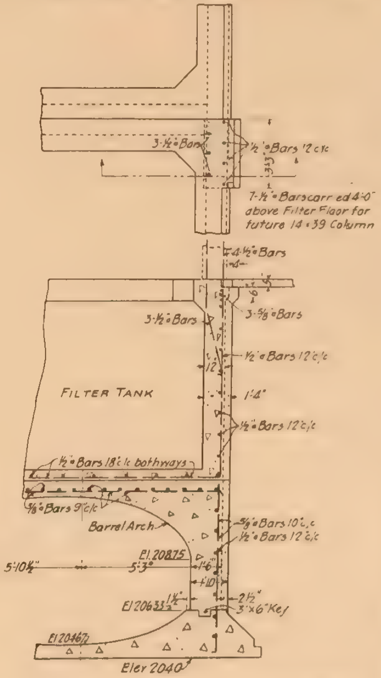
Note - For Section of North Wall of Basin No 1 See Sheet No 30


Elev 2220
Filter
Tanks
Class "B"
Class "D"
Class "C"
Center Passage
Elev 2130
El 2125
5/8" ø Bars 9" c/c bothways
Barrel Arch
14" C I Pipe
Ellipse
Elev 20875
Elev 20633
El 2100
El 20467
Parabola
Elev 2040
Elev 20567
3/8" ø Bars 30" c/c
Main Drain
3-6"
14-9"
14 Spaces @ 16-0" = 224-0"
14-9"

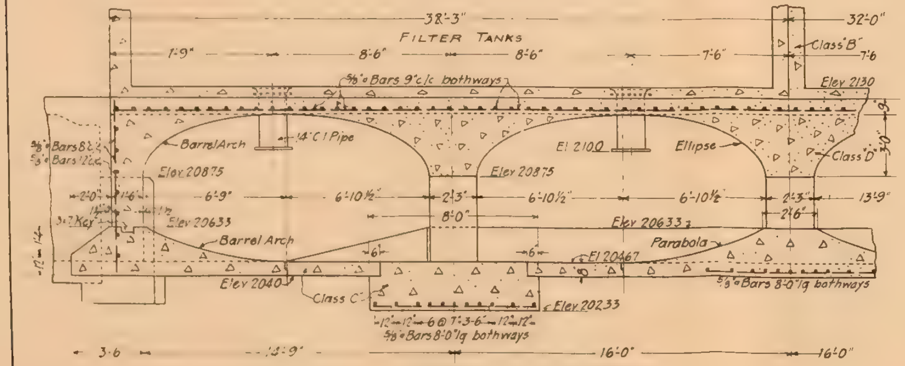
LONGITUDINAL SECTION F-U See Sheet No 4


5/8"
Cypress
6d Wire Nails 8" c/c end burred
1/8" x 1/2" Groove
1½"
3"

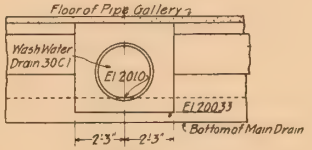
DETAIL OF JOINT IN 6 INCH FLOOR SHOWING WOODEN STRIP
Use same dimensions for Strip in 8 inch Floor


3-½" ø Bars
½" ø Bars 12" c/c
7-½" ø Bars carried 4-0" above Filter Floor for future 14 x 39 Column
4-½" ø Bars
3-5/8" ø Bars
Filter Tank
½" ø Bars 18" c/c bothways
5/8" ø Bars 9" c/c
Barrel Arch
El 20875
El 20633
El 20467
Elev 2040
3"x6" Key
5-10½"
5-3"

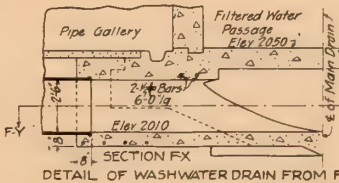
DETAIL OF PILASTER IN GALLERIES
For location see Sheet Nº6


38-3"
32-0"
Filter Tanks
7-9"
8-6"
8-6"
7-6"
Class "B"
5/8" ø Bars 9" c/c bothways
Elev 2130
Barrel Arch
14" C I Pipe
El 2100
Ellipse
Class "D"
Elev 20875
Elev 20633
El 20467
Parabola
Elev 2040
Class "C"
Elev 20233
5/8" ø Bars 8-0" lg bothways
3-6"
13-9"
16-0"
16-0"

SECTION F-V See Sheet No 4

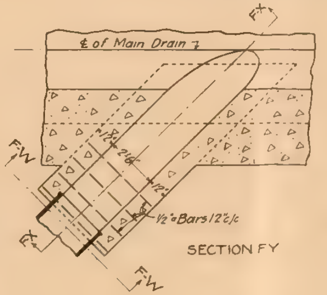

Floor of Pipe Gallery
Wash Water Drain 30" C I
El 2010
El 20033
Bottom of Main Drain
2-3"
2-3"

SECTION F-W

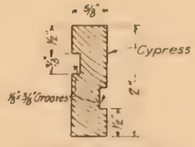

Pipe Gallery
Filtered Water Passage
Elev 2050
℄ of Main Drain
2-½" ø Bars 6-0" lg
Elev 2010
F-Y
F-Y

SECTION F-X

DETAIL OF WASHWATER DRAIN FROM FILTER TANK AT CONNECTION WITH GALLERY DRAIN


℄ of Main Drain
F-X
F-W
½" ø Bars 12" c/c

SECTION F-Y


5/8"
Cypress
1/8" x 3/8" Grooves
2"

JOINT STRIP FOR 4-INCH FLOORS

BALTIMORE CITY WATER DEPARTMENT
FILTRATION DIVISION
CONTRACT NO 11
FILTERS, BASINS & GRADING
FILTERED WATER BASINS
SECTIONS AND DETAILS
APRIL-2-1913

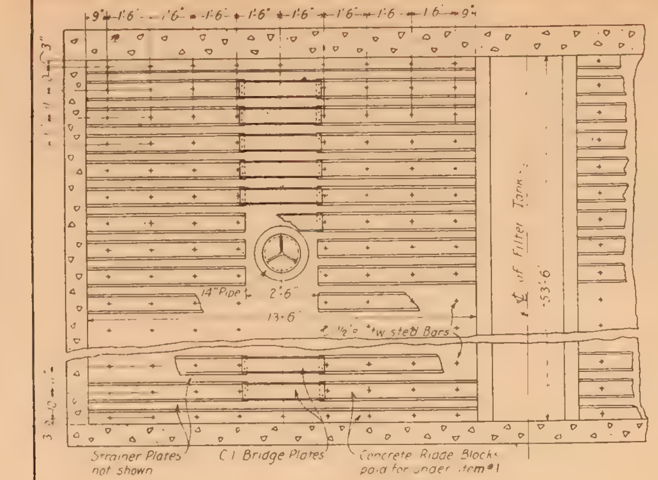
DRAWN
TRACED
CHECKED

James W. Armstrong
ENGINEER, FILTRATION DIV

WATER ENGINEER

SHEET NO 7 OF 38

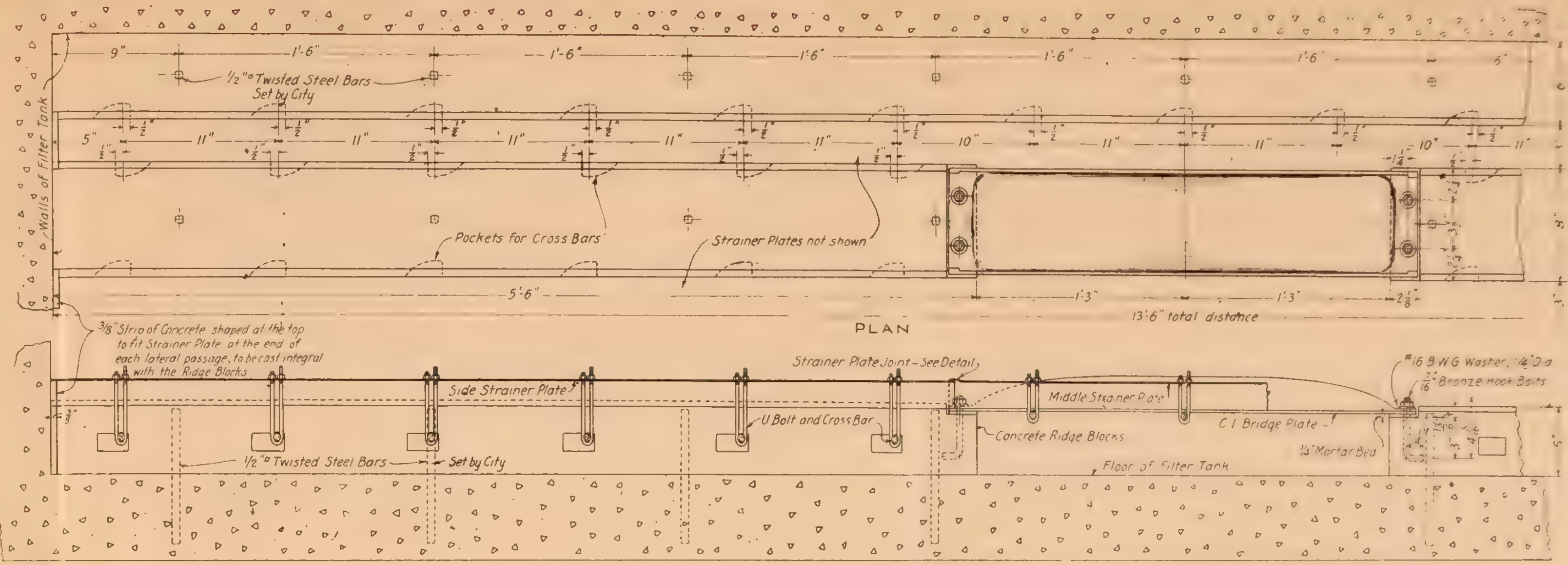
Drawing No 36 A 3



9" 1'-6" 1'-6" 1'-6" 1'-6" 1'-6" 1'-6" 1'-6" 1'-6" 9"
14" Pipe
2'-6"
13'-6"
℄ of Filter Tank
53'-6"
1/2"⌀ twisted Bars
Strainer Plates not shown
C.I. Bridge Plates
Concrete Ridge Blocks paid for under item #1

PLAN OF FILTER

0 5FT

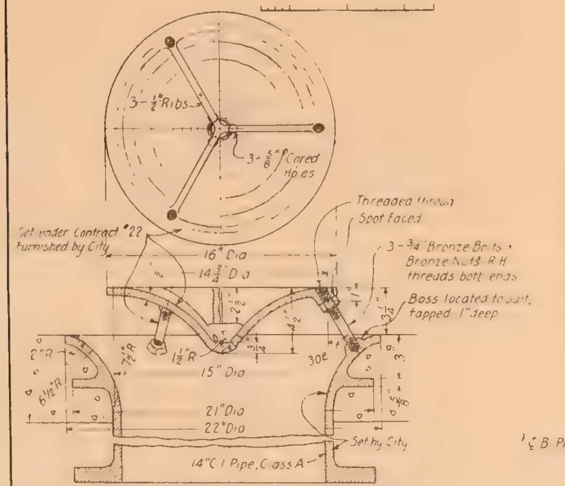


Walls of Filter Tank
9"
1'-6"
1/2"⌀ Twisted Steel Bars Set by City
5"
11"
10"
1/2"
Pockets for Cross Bars
Strainer Plates not shown
5'-6"
1'-3"
2 1/8"
13'-6" total distance
PLAN
3/8" Strip of Concrete shaped at the top to fit Strainer Plate at the end of each lateral passage, to be cast integral with the Ridge Blocks
Side Strainer Plate
Strainer Plate Joint - See Detail
Middle Strainer Plate
#16 B.W.G. Washer, 1/4" Dia
3/16" Bronze Hook Bolts
U Bolt and Cross Bar
Concrete Ridge Blocks
C.I. Bridge Plate
1/4" Mortar Bed
1/2"⌀ Twisted Steel Bars — Set by City
Floor of Filter Tank
ELEVATION

ELEVATION

DETAILS OF ARRANGEMENT

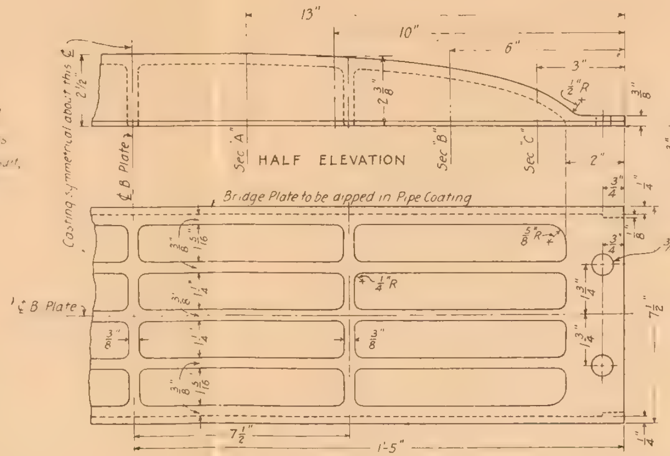
0 3 6 9 12IN 1FT



3-1/2" Ribs
3-5/8" Cored Holes
Threaded through Spot Faced
Set under Contract #22 Furnished by City
16" Dia
14 3/4" Dia
3-3/4" Bronze Bolts Bronze Nuts R.H. threads both ends
Boss located to suit, tapped 1" deep
1 1/2" R
15" Dia
30°
21" Dia
22" Dia
Set by City
14" C.I. Pipe, Class A

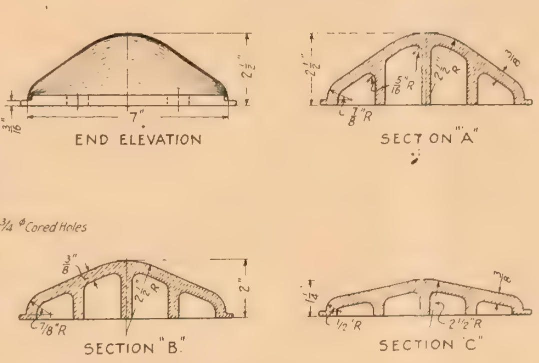
DETAIL OF 14" PIPE AND DEFLECTOR PLATE

0 3 6 9 12IN



13"
10"
6"
3"
1/2" R
2 1/2"
Casting symmetrical about this ℄
℄ B Plate
Sec "A"
Sec "B"
Sec "C"
HALF ELEVATION
2"
Bridge Plate to be dipped in Pipe Coating
3/4"⌀ Cored Holes
1/4" R
3/8"
7 1/2"
7 1/2"
1'-5"

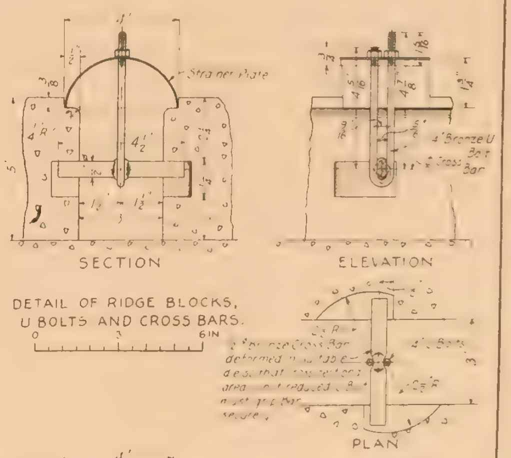
HALF BOTTOM PLAN



7"
2 1/2"
3/16"
END ELEVATION
7/8" R
1/2" R
SECTION "A"
SECTION "B"
2"
2 1/2" R
SECTION "C"

DETAILS OF C.I. BRIDGE PLATE

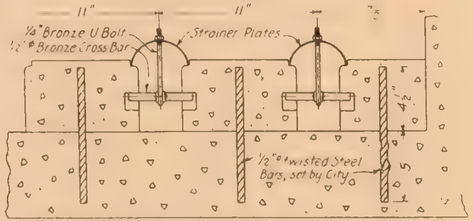
0 1 2 3 4 5 6 7 8 9 10 11 12IN



Strainer Plate
4 1/2"
5"
1 1/2"
SECTION
1/4" Bronze U Bolt
Cross Bar
ELEVATION
PLAN

DETAIL OF RIDGE BLOCKS, U BOLTS AND CROSS BARS.

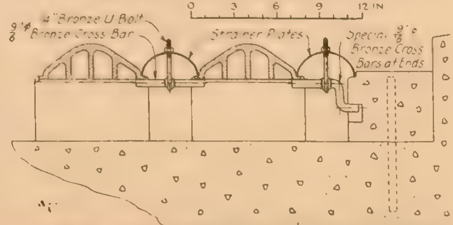
0 3 6IN



11"
11"
1/4" Bronze U Bolt
1/2"⌀ Bronze Cross Bar
Strainer Plates
4 1/2"
1/2"⌀ twisted Steel Bars, set by City

SECTION THRU. RIDGE BLOCKS

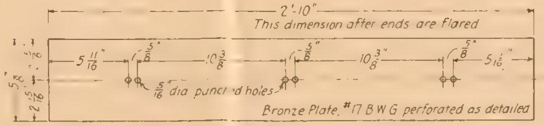
0 3 6 9 12IN



1/4" Bronze U Bolt
9/16" Bronze Cross Bar
Strainer Plates
Special Bronze Cross Bars at Ends

SECTION THRU BRIDGE PLATES

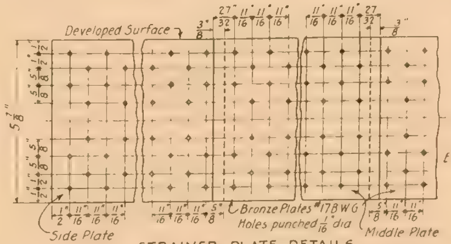
0 3 6 9 12IN



2'-10"
This dimension after ends are flared
5 11/16"
5/8"
10 3/8"
5/16" dia punched holes
Bronze Plate, #17 B.W.G. perforated as detailed

MIDDLE STRAINER PLATE.

0 3 6 9 12IN

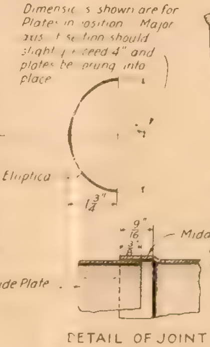


Developed Surface
3/8"
27/32"
11/16"
5 7/8"
Side Plate
Bronze Plates #17 B.W.G. Holes punched 5/16" dia
Middle Plate

STRAINER PLATE DETAILS.

0 1 2 3 4 5 6IN

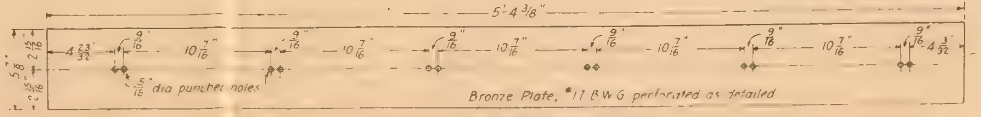
Dimensions shown are for Plates in position. Major axis of section should slightly exceed 4" and plates be sprung into place



Elliptical
1 3/4"
9/16"
Middle Plate flared all around at each end, as indicated
Side Plate

DETAIL OF JOINT

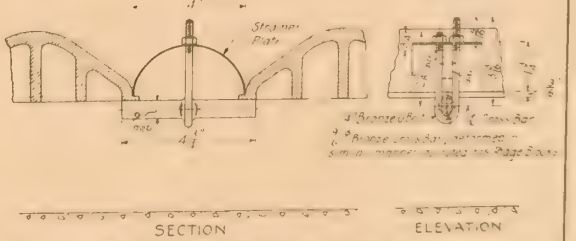
0 1FT



5'-4 3/8"
4 23/32"
9/16"
10 7/16"
5/16" dia punched holes
Bronze Plate, #17 B.W.G. perforated as detailed

SIDE STRAINER PLATE

0 3 6 9 12IN



Strainer Plate
4 1/2"
1/4" Bronze U Bolt
Cross Bar
Bronze cross Bar
SECTION
ELEVATION

DETAILS AT BRIDGE PLATES

0 1 2 3 4 5 6IN

BALTIMORE CITY WATER DEPARTMENT
FILTRATION DIVISION
CONTRACT NO 22
FILTER EQUIPMENT
DETAILS OF STRAINER SYSTEM
SCALES AS NOTED

DRAWN E.B.
TRACED E.B.
CHECKED

James W. Armstrong
ENGINEER FILTRATION DIV

Ezra B. Whitman
WATER ENGINEER

Filters.

The coagulated water, after leaving the mixing basins or the coagulating basins, enters the upper conduit in the center passage, and from this conduit is delivered the coagulated water conduits in the two pipe galleries as shown on Drawing No. 31-A-3, and from the pipe galleries can be delivered to anyone of the thirty-two filter units. In the typical section on Drawing No. 41-A-3 a cross section of this gallery and one of the filter tank units is shown.

The water passes from the reinforced concrete conduit marked "Coagulated Water" through a 30-inch pipe into a filter tank. The details of each one of these filter tanks is shown on Drawing No. 37-A-3. The coagulated water enters the center gutter shown on the cross section F-C on this drawing and flows from this center gutter into the two parts of the filter tank into which the tank is divided by this center gutter.

The sand and gravel are placed in the filter tank to a depth of approximately four feet, the gravel resting upon a strainer system, details of which are shown in Drawing No. 67-A-3, and the sand is placed on top of the gravel. The water entering the filter passes down through the sand and gravel into the strainer system and enters the cast-iron pipe extending under the filtter tanks into the clear water reservoir, as shown on Drawing No. 41-A-3. This outlet piping is connected to the filtered water conduit in the pipe gallery and this filtered water conduit delivers the water into the clear water reservoir. under the filter units. After entering the pipe gallery, however, the water is passed through a rate controller which controls the amount of water which is allowed to pass through the filter and, therefore the rate of operation of the filter.

The filtration of the water through the sand is continued until the dirt and coagulant collects in and on the sand to such an extent that the loss of head makes it necessary to remove the accumulated dirt. This is done by closing the valve into the filter water conduit and opening a valve from the 30-inch wash water pipe which is carried on top of the coagulated water conduit as shown in Drawing No 41-A-3. The wash water under pressure then passes through the piping in the clear water reservoir and enters the drainage system under the sand and gravel layers. It passes through the strainer plates and up through the gravel and sand at such a velocity that it washes all the dirt out of the sand, and the dirty water enters the V-shaped wash water gutters shown on Drawing No. 37-A-3. From these V-shaped gutters it enters the center gutter and is discharged through cast-iron piping into the triangular shaped conduit under the filter water conduit of the pipe gallery. This dirty water then passes from this triangular passage or main drain to the lower conduit of the center passage and is carried toward the head house and enters the 48-inch concrete drain shown on Drawing No. 31-A-3, from which it is discharged into the wash water dam where the mud settles out and the clarified water passes into Herring Run.

The water used for washing the filters is the pure filtered water which is pumped from the clear water reservoirs into the wash water tanks shown on Drawing No. 31-A-3. These wash water tanks are placed at such elevations that they give the proper head to the water to produce the desired rate of flow of water up through the filters to bring about the best washing of the sand in the filters.

The rate controllers which control the rate at which the water passes through the filters work automatically, and if the demands of the city require an increased amount of water, these rate controllers will automatically increase the quantity of water passing through the filters up to the maximum rate at which it is desired to operate each bed. If the demands for water by the city falls off, the rising of the water in the clear water reservoirs under the filters will automatically check the flow of water through the rate controllers.

Filtered Water Reservoirs.

The rate controllers on each filter will take care of all ordinary fluctuations in the use of water by the city. In order to take care of any sudden demands, however, it is necessary to have a reservoir of from three to four hours capacity, considering the average daily consumption for the entire city. Therefore, two reservoirs, each having a capacity of about seven and one-half million gallons, were built to receive the filtered water from the filtration plant.

One of the characteristics of filtered water is that if exposed to the sunlight, algae very quickly grow in this clear water and produce tastes and odors which are most disagreeable. In order to obviate this it is necessary to cover filtered water reservoirs and the two reservoirs which are nearing completion at Lake Montebello are being covered with a groined arch construction.

The water after passing through the filtered water reservoirs is delivered into a nine-foot conduit, which carries the water to the gate house at Lake Clifton, where it enters the main distributing pipes leading to the city.

Letting of Contracts.

The first contract to be let on the filtration work was Contract No. 4, to C. W. Lane & Company, for the filtered water reservoirs. This contract was awarded on November 20, 1911.

The second contract to be awarded was for the railroad spur track into the filtration plant from the United Railways and Electric Company's tracks on Harford road. This contract was awarded to Malcolm W. Hill & Company on March 5, 1913.

Plans and specifications for the main filtration contract, including the coagulating basins, and the entire filtration plant, including equipment, were prepared and bids were asked upon these plans and specifications, which were opened by the Board of Awards on April 30. The lowest bid received was from the Keystone State Construction Company of Philadelphia, Pa., and amounted to $971,187.41.

The following is a copy of a letter sent to the Board of Awards recommending the rejection of these bids:

May 7, 1913.

Board of Awards of Baltimore City.

Gentlemen—At the special meeting of the Water Board to consider the bids received by the Board of Awards on April 30, the Water Board unanimously adopted the following resolution:

"Resolved that the Water Board recommend to the Board of Awards that bids for filters, basins and grading (Contract No. 11) be rejected as being too high, and that the Board further approves of the specifications drawn for readvertising to the end that fuller and more competition will be produced."

In arriving at this conclusion that the bids for the proposed filtration plant are too high, the following data was considered:

Excavation.

Bids received for earth excavation were as follows:

Keystone State Construction Company	$0 80
New York Continental Jewell Filtration Company	85
Oscar Daniels Company	95

The low bid for the excavation for filtered water reservoirs, which are immediately adjacent to the proposed filtration plant, was 35 cents. Other bids received for this same work were 46 cents, 68½ cents, 50 cents, 45 cents, 70 cents, 55 cents, 74 cents and 65 cents. At the Back River Disposal Works the main grading contract was let for 29 cents per cubic yard, while on the second contract, which included only shallow cuts and much more expensive work, the low bidder's price for excavation was 50 cents. The other bids were as follows: 88½ cents, 45 cents, 50 cents, 50 cents, 60 cents, 45 cents, 75 cents, 40 cents and 80 cents.

Judging not only by these bids, but our general knowledge of the cost of excavation work, I consider the bid of 80 cents for earth excavation for the proposed filtration plant much too high.

CONCRETE—CLASS "B."

In connection with our Class "B" concrete for the filtration plant, the bids received were as follows:

Keystone State Construction Company	$13 90
New York Continental Jewell Filtration Company	14 00
Oscar Daniels Company	14 50

This concrete includes wash water and filter tanks and is composed of reinforced concrete of 6-inch, 9-inch and 12-inch walls and 6-inch floors and walls and beams. For similar concrete at Back River Disposal Plant the low bidder's price was $9.00. The prices received from other bidders for this concrete ranged from $8.00 to $12.00 a yard. For similar work a contract was awarded last fall for the extension of the sewage disposal works, and the cost of similar concrete to the Sewerage Commission will be $8.15. The low bid received for the New York filter plant for similar classes of concrete was $10.60, while the average bid was $12.84—the bids ranging from $10.60 to $17.50 per cubic yard. At the opening of the bids for the St. Louis filtration plant, the price bid by the low bidder for similar concrete was $9.68 per cubic yard. The other bids received were $10.44, $11.00 and $13.00. In the light of these bids received for similar work, and my knowledge of the cost of concrete work of similar character, I believe that the price bid by the Keystone State Construction Company of $13.90 for this class of concrete is much too high.

CONCRETE—CLASS "C."

This class of concrete includes floors, basins and galleries, and the bids received for the same were as follows:

Keystone State Construction Company	$11 80
New York Continental Jewell Filtration Company	12 00
Oscar Daniels Company	13 00

The low bidder for the New York filter plant bid $6.50 for similar concrete, while the other bids ranged from $6.00 to $8.25, with the average bid of $6.80. At the Back River Disposal Works, the floor work of which I had charge was paid for at the rate of $5.65 per cubic yard. The other bids for this floor concrete ranged from $5.10 to $8.25 per cubic yard. The present Back River contract now under construction will cost the city $6.20 a yard. For the St. Louis filter plant the floor concrete was let for $7.00 per cubic yard, while other bids received were $5.92, $10.00 and $11.50. The low bidder for the filtered water reservoirs now being constructed adjacent to the proposed filtration plant will receive $7.15 for this class of concrete, while two other bidders bid $7.00 for this class of concrete, and the highest bid received was $11.00. From the consideration of the bids above quoted and my knowledge of the cost of concrete of similar character, I believe that the price bid by the Keystone State Construction Company for this class of concrete is much too high.

Concrete—Class "D."

This class of concrete includes some thin sections, but the bulk of it is for walls from 12 inches to 36 inches in thickness, and the work also includes groin construction under the filters. The prices bid were as follows:

Keystone State Construction Company	$12 20
New York Continental Jewell Filtration Company	12 60
Oscar Daniels Company	13 00

For the filtered water reservoirs the prices received for similar work was $11.20 for the walls and columns and $8.90 for concrete in the groins. Other bids received for these two classes of work for the filtered water reservoirs, which correspond to one class in the contract under consideration, were as follows: $7.30 and $10.60, $9.71 and $9.19, $8.75 and $13.00, $9.60 and $8.20, $9.70 and $9.00, $10.38 and $10.15, $13.00 and $12.00, $11.50 and $14.50.

At the Back River Disposal Plant in connection with the work of which I had charge, the price bid for concrete in walls, principally 12 inches in thickness, was $8.00, while other bids for this class of work were $8.33, $9.00, $8.70, $8.00, $7.75, $9.50, $10.00, $9.00 and $9.00.

For walls 18 inches in thickness and over, the prices received at Back River were $6.50, $6.90, $7.00, $7.50, $7.80, $8.50, $9.00, $8.50 and $8.50. The price which the city will pay for the present contract now being constructed at Back River for walls 9, 10 and 12 inches in thickness will be $7.35; while in the conduits, which have walls 10 inches and 12 inches in thickness, the price paid will be $9.40. From the consideration of these bids and from by knowledge of the cost of the concrete of similar character, I believe that the price bid of $12.00 by the Keystone State Construction Company is considerably too high.

Steel Reinforcing Bars.

There will be nearly two million pounds of reinforcing bars used in the construction of the proposed filtration plant. The prices bid for these reinforcing bars are as follows:

Keystone State Construction Company	4½ cents per pound
New York Continental Jewell Filtration Company	5 cents per pound
Oscar Daniels Company	5 cents per pound

The prices bid for reinforcing steel for the filtered water reservoirs were as follows: 2½ cents, 3¾ cents, 4 cents, 4 cents, 5 cents and 3½ cents.

At the Back River Sewage Disposal Works the prices bid for the reinforcing steel on the work of which I had charge were: 3 cents, .032 cents, 4 cents, 3 cents, 3 cents, 3 cents, 3½ cents, 5 cents, 5 cents and 4 cents The prices bid for the Sewage Disposal Plant now under construction were 2.8 cents and 3 cents. The prices bid for steel reinforcing for the St. Louis filter plant were 2.88 cents, 3⅓ cents, 3¾ cents and 3½ cents. From the consideration of these bids received for similar work and from my knowledge of the cost of bending and placing steel reinforcing work, I consider the price bid for these steel reinforcing bars of 4½ cents per pound as being too high.

I have also averaged the cost of the concrete work in the New York filter plant, the St. Louis filter plant and the Baltimore filter plant, taking the average of the low bidder in each one of the places mentioned, and I find that the average price for the New York filter plant concrete is $7.38, while the average price of the St. Louis filter plant concrete is $9.67 and the average for the proposed Baltimore filter plant concrete, as given by the low bidder, is $12.63. This confirms my view that the concrete items, as bid by the Keystone State Construction Company, are too high.

In regard to the filter equipment item, I find that this item in the Baltimore plant included chemical feed apparatus which was not included in this item in the St. Louis bids. Our estimate of the cost of the chemical feed apparatus is about $10,000 and reducing the bid by this amount would leave the Baltimore bid $375,000. The St. Louis plant is just 25 per cent. larger than the Baltimore plant and the cost of the filter equipment should be almost exactly proportional to the size of the plant. Therefore, by increasing the Baltimore bid by 25 per cent. to make it comparable with the St. Louis bid, I find that the cost would be $468,750. The low bid received by St. Louis for the filter equipment was $432,000. At this place all the bids for the filter equipment were thrown out as being too high. On the same basis as St. Louis, the bid for the filter equipment for Baltimore is nearly 10 per cent. higher than at St. Louis. I therefore feel that the Baltimore bids for the filter equipment are much higher than they should be.

These comparisons cover the principal items of the contract and I am also satisfied that a number of the smaller items are much higher than a fair profit on the work would warrant. Under these circumstances I therefore beg to recommend to your Honorable Board, as I did to the Water Board, that all the bids for the filtration plant be thrown out and that the work be separated so that the excavation and concrete work and other items which can be bid upon by general contractors be let in one contract, while the filter equipment be let in one or more contracts as may be later decided.

In accordance with these recommendations, I have had specifications prepared for the general contract, and I beg to submit them herewith to your Honorable Board for its approval, subject to the approval of the City Solicitor.

Very respectfully,

(Signed) Ezra B. Whitman,
Water Engineer.

Upon the rejection of the bids by the Board of Awards, this large contract was divided into a number of smaller ones, viz.:

Contract No. 11—Filters, basins and grading, which included the excavation and concrete work for the coagulating basins and filters.

Contract No. 12—Sluice gates.

Contract No. 13—Gate valves.

Contract No. 14—Cast-iron pipe and specials.

Contract No. 19—Pumping machinery.

Contract No. 20—Electrical equipment.

Contracts Nos. 19 and 20 not only included the pumping machinery and electrical equipment of the original contract, but also the pumping station. Plans and specifications were also prepared for the filter equipment and the rejection of the original bids for the entire filtration plant was more than justified by the low bids received upon these smaller contracts, which aggregated about $315,000 less than the $971,000 bid by the Keystone State Construction Company.

The progress made on each one of the contracts let is given in the report of Mr. James W. Armstrong, engineer of the Filtration Division, and a report on the failure of the groined arches of the filtered water reservoir, prepared by Mr. John H. Gregory of New York, is given in Appendix No. 3. This report is an excellent treatise on groined arch construction and is therefore included in this report.

The following is a tabulation of the contracts awarded for work on the Filtration Division to December 31, 1913, giving the contract price, amount earned to December 31, 1913, on each contract and the percentage of work done.

TABULATION OF CONTRACTS AWARDED FOR WORK ON FILTRATION DIVISION TO DECEMBER 31, 1913.

Contract Number.	Contractors.	Contract Price.	Amount Earned to December 31, 1913.	Percentage of Work Done.	Description of Contract.
4	C. W. Lane & Co.	$171,748 60	$107,213 70	62.40 per cent.	Filtered water reservoir.
9	Malcolm W. Hill	11,555 00	11,555 00	100.00 per cent.	Railroad.
11	Claiborne-Johnston Company	396,895 65	83,474 20	21.00 per cent.	Filters, basins, gradings.
12	Coffin Valve Company	16,356 00	9,023 00	55.10 per cent.	Sluice gates.
13	Columbian Iron Works	27,234 56	....	....	Valves.
14	Glamorgan Pipe and Foundry Company	44,594 00	12,492 00	28.01 per cent.	Cast-iron pipe and specials.
18	Peddicord Sons Transfer Company	1,856 40	629 68	33.92 per cent.	Drayage.
19	Southwark Foundry and Machine Company	22,809 00	....	....	Pumping machinery.
20	Westinghouse Electric and Mfg. Company	26,800 00	....	....	Electric equipment.
21	Elkan-Tufts Construction Company	94,610 63	22,603 20	23.90 per cent.	Head house, Pumping Station and conduit.
	Totals	$894,459 84	$246,990 78		

No payments have been made on the three machinery contracts, although this part of the equipment is being manufactured in the shops of the various contractors.

GUNPOWDER SUPPLY IMPROVEMENT DIVISION

This Division had charge of the design and construction of the new Loch Raven Dam and all its appurtenant works, including the conduit connecting the new dam with the old Loch Raven Tunnel, the building of about four miles of road and the building of two bridges—one six hundred feet long and one nine hundred and fifty-four feet long. This Division has also had charge of the new tunnel and conduits which will be built to connect the filtration plant with the existing distributing mains throughout the city.

Before detailing the progress of the work on these various contracts, the following description of the investigations leading to the building of the new dam and a description of the dam itself is given, so that the details of this work can be better understood:

New Loch Raven Dam.

The new Loch Raven Dam, which is being built for the purpose of augmenting the water supply of Baltimore, is rapidly nearing completion. The necessity for the increased supply was recognized about ten years ago by Mr. Alfred M. Quick, who was then Water Engineer, and he proposed building a large impounding reservoir in the valley of the Gunpowder River. In 1908 the State Legislature passed an Enabling Act appropriating five million dollars for the purpose of making this improvement in the city's supply. This loan was ratified by the vote of the people in the fall of the same year.

Before proceeding with the construction of the dam in the valley of the Gunpowder, the city administration decided to call in outside experts, and Messrs. John R. Freeman and Frederick P. Stearns were called upon to go over the entire question of improving the water supply for Baltimore. These gentlemen, after a most careful and thorough investigation, submitted a report on March 25, 1910, in which they recommended that the water supply be increased in practically the same manner as that recommended by Mr. Quick, viz., by building a large impounding reservoir in the valley of the Gunpowder River and by the building of a filtration plant.

Present Sources of Supply.

At the present time Baltimore takes its water from two sources. The main source of supply is from the Gunpowder River, which has a drainage area of three hundred and eight square miles above the existing dam. This dam is built of stone and is about twenty-five feet in height above the bed of the river and is located about seven miles northeast of the city limits. The reservoir created by this dam is known as Loch Raven and originally had a capacity of five hundred and ten million gallons. This capacity has been greatly reduced by deposits of silt since the dam was completed in 1881. This long, narrow reservoir, extending between two high hills for a length of four miles, is now filled to such an extent that it has but little larger cross-section that the normal cross-section of the river. By 1900 the capacity of the reservoir was only seventy-eight million gallons, although dredging had been carried on from 1896 to 1900.

In 1900 the city purchased a suction dredge, which was operated continuously until the fall of 1911—the mud from the bottom of the reservoir being pumped through a long pipe line to a point below the old dam. This dredging increased the capacity of Loch Raven from seventy-eight million gallons to about one hundred and seventy-eight million gallons. It is calculated that the annual deposit of silt from 1881 to 1909 was two hundred and twenty-six thousand cubic yards.

The annual yield of the Gunpowder River, according to records kept 'by the Water Department for the past twenty-seven years, has averaged about two hundred and eighty million gallons per day. The minimum flow of the stream, however, has been as low as fifty-five million gallons per day. The present water consumption of Baltimore is about seventy-five million gallons per day. From these figures it can be seen that if sufficient storage is obtained to store the water, which at the present time passes over the dam during rainy periods, the stream-flow of the Gunpowder River is sufficient to supply Baltimore with water for a number of years in the future. It is for the purpose of supplying this storage that the new dam at Loch Raven is being constructed.

From the gate house at the old dam at Loch Raven a tunnel seven miles long and twelve feet in diameter leads to Lake Montebello, just within the city limits. This lake has a capacity of four hundred and ninety-six milllion gallons and is connected by a twelve-foot tunnel with Lake Clifton, which has a capacity of two hundred and sixty-five million gallons.

The second source of supply for the city is from Jones Falls at Lake Roland. Jones Falls has a drainage area above the Lake Roland Dam of about forty square miles and it was first used as a source of the city's supply about fifty years ago. Lake Roland is about five miles north of the city. The original capacity of Lake Roland was four hundred million gallons of water. This capacity has been largely reduced by deposits of silt, but by means of dredging its present capacity is about three hundred million gallons.

The population of the Jones Falls watershed is over one hundred and fifty persons per square mile and is increasing very rapidly. The stream flows through the Green Spring Valley, which has become a fashionable suburb of the city, and there are many villages and handsome residences springing up in this valley. In addition to the pollution from the Green Spring Valley, two of the largest towns in Baltimore County (Towson and Lutherville) are located on streams emptying into Lake Roland, after flowing only a few miles. The sanitary condition of this source of supply is rapidly becoming a menace to the city, but it cannot be completely abandoned until the new dam is completed at Loch Raven. The average daily yield of the Jones Falls watershed is about thirty-five million gallons of water per day.

A masonry aqueduct five feet wide, six feet four inches high and about four miles long leads from Lake Roland to the Hampden Reservoir, which has a capacity of about forty-nine million gallons. Hampden Reservoir is connected with Druid Lake by cast-iron pipes. Druid Lake has a capacity of about four hundred and twenty-eight million gallons.

During periods of heavy rain, when Jones Falls or the Gunpowder River are in a very turbid condition, the gates at Lake Roland and Loch Raven are closed and the muddy water is allowed to go to waste while the city is furnished with clear water from the storage lakes at Montebello and Clifton from the Gunpowder supply and at Hampden and Druid Lakes from the Jones Falls supply.

It can be readily seen that this method of by-passing the muddy water makes it impossible to make use of the greater part of the run-off of the quick thunder showers falling in the summer time and it has often been necessary to draw down on the available storage supply in the city limits at a time when the stream-flow has been very low. This condition of affairs, however, has been remedied to some extent by the use of alum to settle the turbid waters in Lakes Montebello and Hampden. Before the introduction of the use of alum it had been necessary on several occasions to turn very muddy and turbid water into the city mains, very much to the disgust of the entire population of the city.

Capacity of New Dam.

The accompanying blue print gives the stream-flow records of the Gunpowder River from 1883 to 1914. A careful survey was made of the valley of the Gunpowder River for a distance of ten miles above the old dam. This survey having been made, it was possible to compute the capacities of reservoirs behind dams with variable crest elevations, and the following table shows the available storage and other data for dams built to various crest elevations:

TABLE No. 1.

Contour Elevation.	Area Acres.	Capacity Between Contours. Million Gallons.	Total Capacity Below Contours. Million Gallons.
320	11,350	64,863	190,956
300	8,557	48,756	126,093
280	6,407	18,466	77,337
270	4,928	14,508	58,871
260	3,977	11,642	44,363
250	3,169	9,059	32,721
240	2,391	3,695	23,662
235	2,144	3,253	19,967
230	1,866	5,343	16,714
220	1,442	4,116	11,371
210	1,116	3,131	7,255
200	770	2,166	4,124
190	489	1,323	1,958
180	211	458	635
170	97	177	177
158			

Messrs. Stearns and Freeman, from the stream-flow records of the Department, computed the following table showing the amount of storage that would have been required to supply from the Gunpowder River different daily quantities of water throughout the greatest droughts of twenty-seven years prior to 1910. They first reduced, however, the stream-flow records on an average of 6 per cent. from the quantity shown by the departmental records in order to allow for obstructions on the spillway and for a different formula for computing the flow over the dam:

TABLE No. 2.

Average Daily Water Consumption. (Million Gallons).	Available Storage Capacity Required. (Billion Gallons).	Storage in Equivalent Inches Depth Over Drainage Area of 308 Square Miles.	Length of Longest Continuous Period that Reservoir Would Have Been Below Spillway Crest.
90	2.3	0.37	
100	3.5	0.56	
110	4.7	0.75	
120	6.2	1.16	1 year, 2 months
130	8.6	1.61	1 year, 2 months
140	10.0	1.87	1 year, 6 months
150	13.0	2.44	1 year, 7 months
160	16.0	3.00	1 year, 7 months
170	21.0	3.94	1 year, 8 months
180	27.0	5.06	1 year, 10 months
190	38.0	7.13	3 years, 0 months
200	47.0	8.81	3 years, 8 months
210	57.0	10.7	3 years, 10 months
220	66.0	12.4	3 years, 11 months
230	75.0	14.1	4 years, 1 month

PHOENIX
WARREN
COCKEYSVILLE
DULANEY VALLEY RD.
BOSLEY P.O
SUMMERFIELD STA
LOCH RAVEN STA
DEPARTMENT
MAP SHOWING
WITH EXISTING AND PROPOSED ROADS
SCALE 1 IN =
PRESENT ROADS
PROPOSED
Approved
Water Engr.
93
91
90
92
89
88
120
88A
86A
87
86
82
84
82A
71
71A
70½
81
82A
72
80
77
79
78
75
74
25½
24
25B
23A
25
35
27
23B
34
36
30
31
38
30A
12A
18
19
22
21
20
3A
4
3
2
11
10½
10b
9a
12
9a
9
9c
13
13A
17
8
6
14
15
1B
1A
1C
1
1D
1D
1
1F

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Messrs. Stearns and Freeman also prepared the following table after a study of the water consumption of the city for a period of thirty years and the growth in population of the city in order to estimate the number of years in the future that the city could safely take its supply from the Gunpowder River:

TABLE No. 3.

Year.	Years From Now.	Probable Population.		Probable Quantity of Water Used per Capita per Day. Gallons.	Total Quantity Water Probably Required, Av'g Million Gallons per Day.
		Per Cent. Growth for Decade.	Estimated Total.		
1915......	5	....	660,000	130	86
1920......	10	20.0	720,000	135	97
1930......	20	17.5	850,000	145	123
1940......	30	15.0	980,000	150	147

A study of the map prepared by the Water Department shows that the crest of the dam can be carried to an elevation of 237 feet above mean tide without making it necessary to flood the tracks of the Northern Central Railway near Phoenix, Md., or to flood the town of Cockeysville, Md. To carry the flood line higher than this elevation would have caused a greatly increased expense. It will also be seen from Table No. 1 that the dam with a crest elevation of 237 feet would give a reservoir with a capacity of about twenty-one billion gallons. Table No. 2 shows that a reservoir with this capacity would give an average daily water consumption of one hundred and seventy million gallons per day, which is approximately two and one-half times the present consumption of the city. This amount of water, it will be seen from Table No. 3, would probably meet the needs of the city until 1950 or later.

Another very important reason for carrying the flow line to this height is that it will make it possible to deliver the water from the resulting reservoir by gravity to the filtration plant, which will in turn discharge the water at a sufficiently high level to supply the middle service of the city without pumping and furnish a greater water pressure in the low service district of the city, which is at present fed by gravity from the present Loch Raven Reservoir with a water elevation of 171 feet A. M. T.

In order to make the greater part of this twenty-one billion gallons available, however, it will be necessary to build a pumping station to pump the water to the filters before the water falls more than ten feet below the crest of the proposed dam.

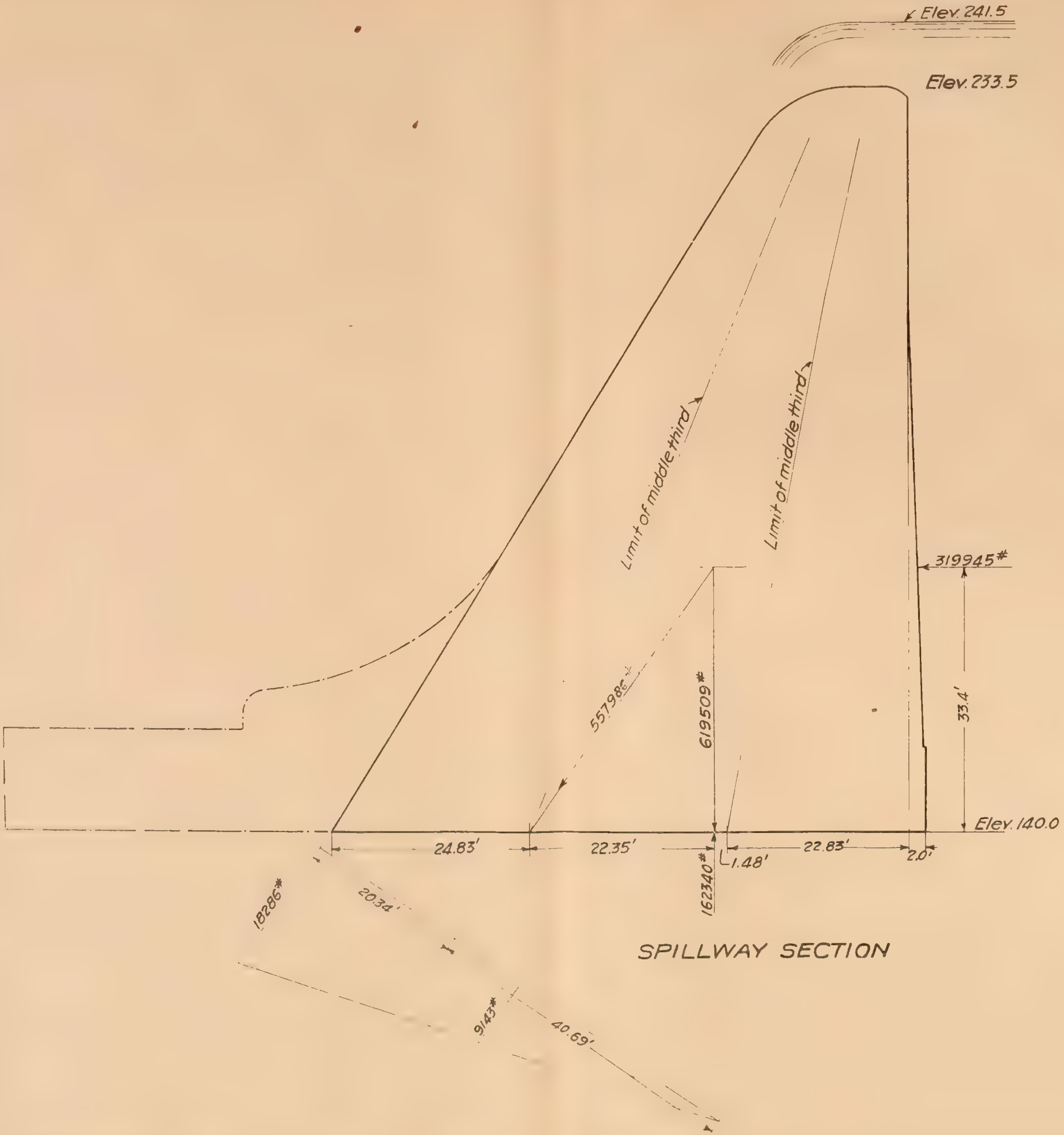
Owing to certain legal complications in connection with the purchase of property in the valley of the Gunpowder it was first decided to build the dam to a crest elevation of only 192 feet, which would give a storage capacity of a little over two billion gallons instead of twenty-one billion gallons. This dam, with a crest elevation of 192 feet, combined with the existing storage reservoirs in the city, which have an available storage capacity of about one and one-half billion gallons, gives a total storage capacity of three and one-half billion gallons. This would furnish a safe daily capacity of about one hundred million gallons of water.

It also developed that it would not be possible to build a dam with a crest elevation of 237 feet and a filtration plant out of the five-million-dollar loan available for improving the water supply. The present city administration does not desire to ask for a further loan in order to build the higher dam, as the city is already greatly burdened with loans in carrying out the extensive improvements which have been made since the great Baltimore fire in connection with new docks, new sewerage system, new street paving for the entire city, extension of the parks and improvement of the Fire Department and and school systems. It has, therefore, been determined to build a reservoir which will have a crest elevation of 192 feet at the present time, although the foundations for this dam have been laid of sufficient width, not only to extend the dam to an elevation of 237 feet, but to extend it to a further elevation of 280 feet if this should be deemed desirable in the future.

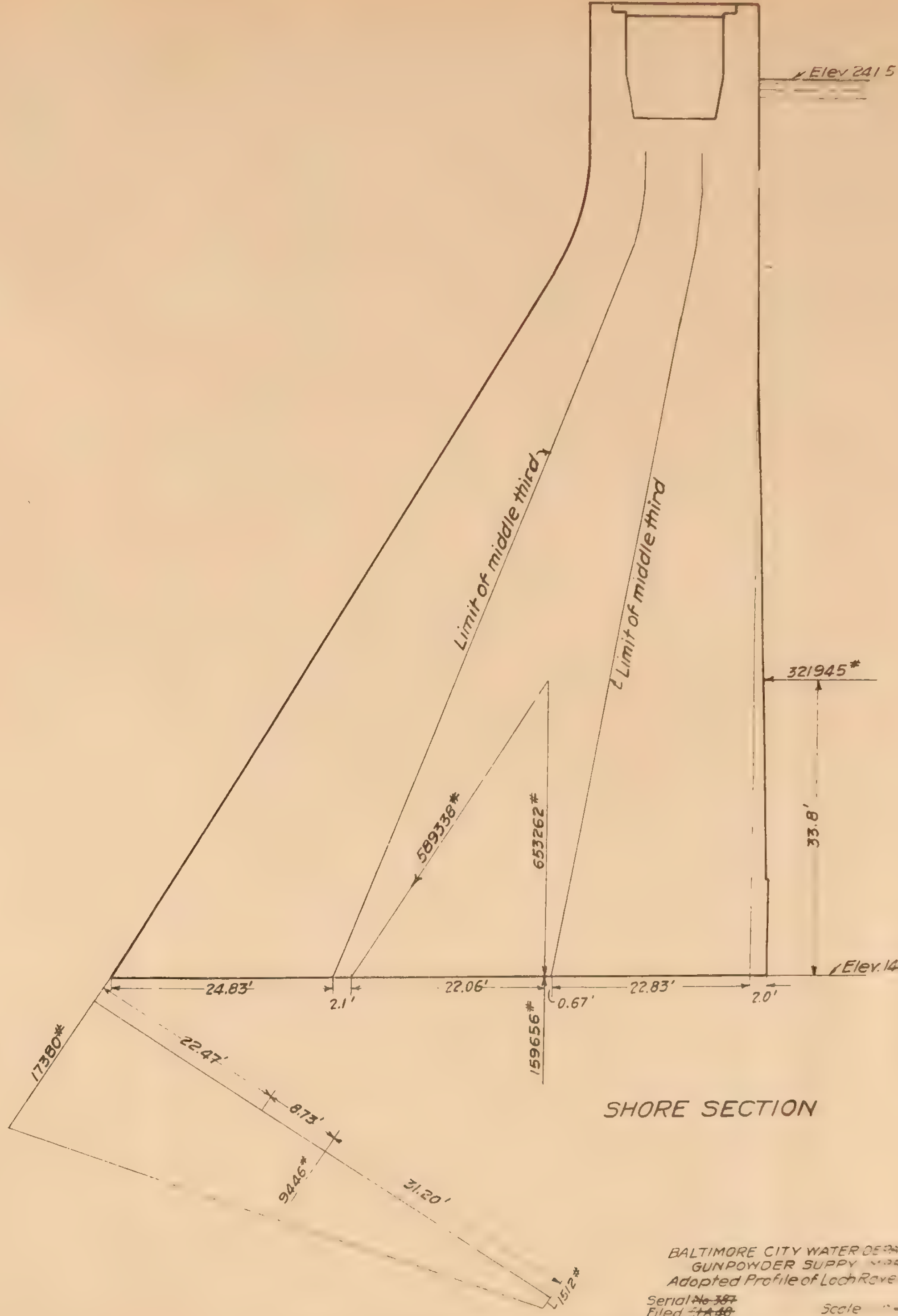
Design of the Dam.

The accompanying diagram shows the section of the dam which will be required when the crest is raised to an elevation of 233½ feet. It is proposed to secure a water level of 237½ feet by placing flash boards upon this crest. In designing the dam, provisions were made for flood water eight feet over the top of the masonry of the spillway and an upward pressure is figured on the horizontal joints and on the bottom of the dam which is equivalent to two-thirds of the head of water at the up-stream face diminishing to zero at the down-stream face of the dam.

The failure of the dam at Austin, Pa., at about the time that the designs for the Loch Raven Dam were being completed, emphasized the necessity of taking every precaution to prevent upward pressure under the bottom of the dam and internal stresses within the body of the dam itself due to water making its way into horizontal joints.


Elev. 241.5
Elev. 233.5
Limit of middle third
Limit of middle third
319945#
33.4'
557986#
619509#
Elev. 140.0
24.83'
22.35'
1.48'
22.83'
2.0'
162340#
18286#
20.34'
9143#
40.69'

SPILLWAY SECTION


Elev. 241.5
Limit of middle third
Limit of middle third
321945#
33.8'
589338#
653262#
Elev. 140.0
24.83'
2.1'
22.06'
0.67'
22.83'
2.0'
159656#
17380#
22.47'
8.73'
9446#
31.20'
1512#

SHORE SECTION

BALTIMORE CITY WATER DEPARTMENT
GUNPOWDER SUPPY [illegible]
Adopted Profile of Loch Raven Dam

Serial ~~No 387~~
Filed ~~S1A 48~~
Date Dec 20, 13
Scale [illegible]

In order to take care of upward pressure under the base of the dam, a system of underdrains has been provided beneath the main foundation and next to the rock. A twelve-inch drain with open joints is placed on the down-stream side of the cut-off wall along the line of the bottom of the foundation of the dam, as shown on the accompanying drawing (No. 51-A-32). Connecting to this drain are a number of six-inch underdrains, surrounded by gravel, which rest on the rock foundation and it is expected that any water which may make its way through the cut-off wall or through the seams of rock on which the dam is built will enter this drainage system without causing any appreciable upward pressure on the base of the dam.

The six-inch underdrains are placed at intervals of approximately thirty feet and they find outlet in risers leading to the top of the foundation apron near its lower end.

The Water Engineer was familiar with the vertical porus drains used in the construction of the Olive Bridge and Kensico Dams in connection with the improvements of the water supply of New York in order to intercept seepage through the body of the dam. It seemed more logical, however, that drains for the purpose should be placed horizontally across the construction joints where the seepage would most naturally occur.

The up-stream side of the dam for a thickness of about seven feet, as shown on Drawing No. 51-A-32, is built of 1-2-4 concrete laid in such a manner that horizontal joints occur at vertical intervals of eight feet. At these horizontal joints, on the down-stream side of the 1-2-4 concrete wall, are laid conduits consisting of porus concrete tile laid in grooves left in this wall. These tiles are fourteen inches square, three feet long and are made of a dry 1-4-8 mixture with the six-inch interior diameter. Expansion joints are provided across the dam parallel to the axis of the stream at intervals of approximately every sixty feet and at each expansion joint there is a vertical well to which the horizontal drains are connected. These vertical wells lead to a gallery built throughout the length of the dam and which gallery drains into the tail waters on the down-stream side of the dam.

The forty-eight inch drain pipes are provided at elevation of inverts of 164 feet A. M. T., one on each side of the spillway, and these will make it possible to drain the lake should it ever be found necessary to do so. These gates will also be used while filling the relief openings which have been left in the first half of the dam to carry the water of the river during the construction of the second half.

Gate House.

The gate house which will control the flow of the water into the city is built into the dam near the west bank of the stream and will be so constructed that there will be duplicate gates which will make it possible to send water to the city through either one or both of the two gate chambers. Should any gate get out of order it will be possible by means of stop planks to shut the water out of the gate chamber and a twenty-four inch drain for the gate chamber is provided, which will discharge into the tail waters of the dam. Provision is also made in this gate house to take water from the varying depths.

During the summer time, when trouble may be experienced from the presence of algae growths, the water for the city will be drawn from the bottom of the lake, as experience has shown that the algae growths are much more numerous in the top layers than in the bottom layers. Should the dissolved oxygen become exhausted in the lower layers and in times of turbid waters, when the top waters will settle clear much more rapidly than the bottom waters of the lake, the waters will be drawn from the top.

The conduits connected with the two chambers of the gate house are each eight feet in diameter and will be brought together just below the gate house into one ten-foot conduit, which is connected with a ten-foot steel pipe line. This steel pipe is surrounded by concrete on the outside and lined with mortar on the inside, which lining has been placed by means of a cement gun and is reinforced with wire mesh.

The gate house, when it is raised to the height recommended by the consulting engineers, will be provided with a hydro-electric plant which will generate electricity—the turbine being operated by the water passing to the city and by using the waste waters in excess of the water being consumed by the city. This current will probably be carried into the city limits and be used at the filtration plant.

The house which will be built over the gate chamber at the present time will be merely a temporary one of wood and shingles. A more permanent structure of stone or concrete would have to be soon torn down as it is possible that the dam will have to be extended to the height recommended by Messrs. Freeman and Stearns in the course of the next ten years.

Arrangements for Bonding High Dam to Present Structure.

When it is decided to carry the present structure up to the height originally recommended, it is proposed to place several rows of porus drains along the steps of the present dam so that any water getting into the joint between the old and the new work will be intercepted before it can produce internal stresses which would threaten the safety of the dam.

In order to bond the new structure to the old, large plum stones are placed projecting above the finished surface of the present structure and these stones will be of great assistance to keep the new structure from sliding on the old.

If it is decided that these plum stones will not furnish sufficient strength to prevent the sliding of the dam, holes can be drilled at regular intervals along the crest of the present structure and iron bars can be grouted into these holes and extended into the new structure. It is believed that the system of drains, combined with the plum stones and the iron bars, will provide sufficient strength against sliding and provide for a sufficient bond between the new work and the old.

Contract No. 1—New Loch Raven Dam.

The contractors for this work were the King-Ganey Contracting Company of New York City, and the following facts in regard to the progress of the work are largely taken from the report of Mr. P. A. Beatty, the assistant engineer in direct charge of the work, made to Mr. Emory Sudler, Division engineer:

The work done during the year 1912 has been described in the 1912 report. The greater part of the construction of the dam inside of the west cofferdam was completed during the first three months of the year.

In the month of April the west cofferdam was broken and construction begun on the east cofferdam. The channel wall parallel with the axis of the stream was built of two lines of planking, two inches thick, placed fourteen feet apart, spiked to range timber and tied across with old steel cables; the space between being filled with soft material in which more or less rock was embedded. On both sides of the wall of the cofferdam a line of boulders was placed to keep the timbers from kicking out, as they were not attached in any way to the concrete. This wall was erected by the contractors contrary to the advice of the resident engineers, who had suggested, during the construction of the dam, that provision be made for attaching the foot of the cofferdam tightly to the concrete. As was anticipated, a great deal of leakage took place along the concrete surface and some through the wall itself. It was finally necessary to build a concrete wall inside of and against this wall of the cofferdam.

In building the channel wall of the cofferdam, north of the dam, the contractor had serious difficulty in making it tight and it leaked badly until a large quantity of rocky material was dumped so as to cut off the current from the east relief opening, when it was possible to control this leak to a great degree. Otherwise, the cofferdam has proved rather tight, with the water at about elevation 168 A. M. T., three feet below the normal level to which elevation it has been generally held during the year, except at the time of freshets.

The excavation has generally been followed closely by concreting. In the east cofferdam the rock encountered has been rather soft, with a considerable amount of mica in it. On this account the excavation was carried rather deeper than in the west cofferdam. It was concluded that the rock would be sufficiently firm to carry any load which might come upon it; that the rough bottom and the rock of down-stream face of the foundation pit would afford ample resistance against sliding, and it was determined to found the dam on this rock, as there appeared to be no reason to expect an improvement in its condition within a practicable depth.

Two-inch pipes were set in the rock at various points and after the concrete was in place these were grouted under a pressure of about eighty pounds. Very little grout was forced out of the pipe under this pressure.

In July, Coleman King resigned as superintendent and J. T. Todd, resident engineer for the city on this contract, was offered the position and accepted it on August 6.

The depth of the cut-off trench averages fifteen feet below the foundation line across the river bed.

Owing to the seamy character of the rock encountered throughout the foundation it has been necessary to go much deeper into the rock in order to secure the proper foundation for the dam than was anticipated from the borings which were originally made. The original estimate of 17,000 cubic yards of solid rock excavation will probably be nearly doubled and it will follow that the amount of concrete used will also be greatly increased over the original estimate. Owing to the increased depth to which it has been necessary to carry the excavation and the fact that the foundations at the two ends of the dam have been laid for the higher dam, the total cost of the work will exceed the original estimate by fully 25 per cent.

The principal quantities of work done to January 1, 1914, are as follows:

Earth, 25,287 cubic yards; loose rock, 5,593 cubic yards; solid rock, 34,758 cubic yards; 1-2-4 concrete, 20,538 cubic yards; 1-2½-5 concrete, 20,528 cubic yards.

Included in the above are the following high dam quantities: 1,912 cubic yards high dam excavation at $1.30, 440 cubic yards cut-off wall excavation at $4.00, 350 cubic yards concrete at $6.75.

In placing the concrete several changes in construction method were allowed. On the west side the concrete was placed continuously between expansion joints, but in order to get over the entire area under construction at short intervals, the spaces between the expansion joints were divided into several blocks which were made truly monolithic for some feet in thickness by concreting day and night shifts. These blocks were made of various heights in such a manner as to afford ample resistance to sliding. The projecting cyclopean stone, which have been used freely through the work, afford additional resistance. All but horizontal joints were finished against forms.

On the east side the contractors were allowed to place much larger areas under construction at a time, these being between expansion joints and usually continuous from cut-off wall to approximately mid-distance from cut-off wall to toe of apron. Except on the cut-off wall only day shifts were run. Where it became desirable, for any reason, to restrict this area, ricks of heavy stone and dry concrete were built, behind which the wet concrete was deposited as usual. It is to be supposed that these "ricks" are more pervious than the surrounding concrete, but it is anticipated that this portion of the dam will not have to resist the passage of water, as it will be relieved of this by the drainage system and that it need not, therefore, be impervious.

On November 15 it became necessary to shoot under the trestle which spanned the east foundation pit and gave railroad communication between the work on the north and south sides of the dam. Owing to the seams in the rock having practically the same slope as the side of the hill, it was feared that a landslide would be started and the holes were very carefully set, loaded and fired. In spite of these precautions a landslide was started and brought down material practically one hundred feet higher up the hill than from the point where the blast was made. This slide occurred on November 15 and carried away the railroad trestle and two derricks, which later had to be reset.

This slide considerably delayed the completion of the work at the eastern end of the dam as it was expected that this blast would be the last one necessary before going ahead with the construction of the dam at this point. It took over a month to get this slide finally cleared out, the railroad trestle rebuilt and the two big derricks re-erected.

An average of two hundred and twenty-five men have been employed on the work during the year. There have been in use on the work eight guy derricks, five stiff-legged derricks, three locomotives, eight dump cars and six flat cars, one one-yard Smith mixer, one No. 3 and one No. 6 McCully crusher, with sand rolls, elevators, screens, bins, etc.

Practically all the stone has come from the city quarry south of the old gate house and it has been of excellent quality. A small amount of stone from the excavation has been used and also a small amount of sand from the river bed was allowed to be used on the work. The greater part of the sand, however, came from the quarry and a sand bank south of the quarry, which is mixed with the stone dust from the crusher. Some of the sand from the Arundel Sand and Gravel Company has also been brought in on the Maryland and Pennsylvania Railroad. Forty-six thousand seven hundred and eighteen barrels of Alpha Cement have been used to date and about 18 per cent. to 20 per cent. of the masonry of the dam is composed of cyclopean stone.

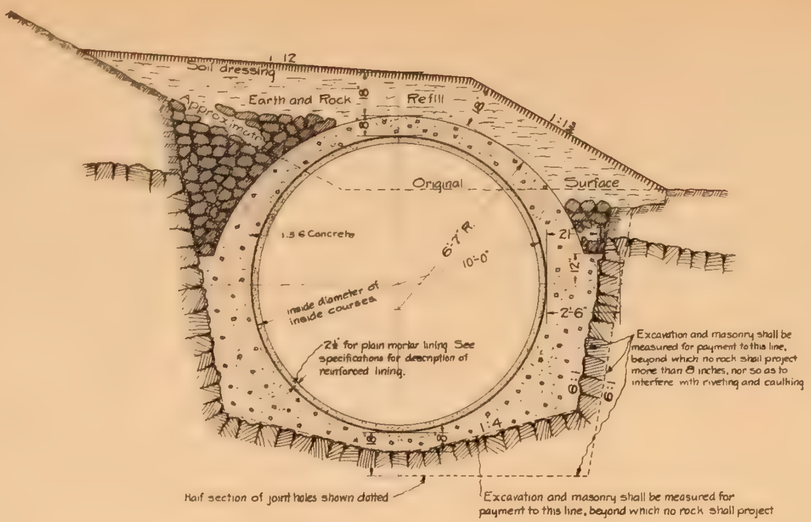
The sanitary conditions of the camp and the health of the men have been very carefully watched throughout the year and during the summer months—monthly inspections having been made by the Health Commissioner of the City of Baltimore. The sanitary conditions of the camps and the health of the men have been very satisfactory. For the contractor, Dr. Daniel of St. Thomas Jenifer has been the physician in charge. There have been a number of minor accidents and one laborer lost his arm and one lost his life.

Contract No. 2—Masonry for Bridge No. 1.

This contract was awarded on October 23, 1912, to the Singer-Pentz Company and was sub-let to Williams & Strauss, who completed it on July 3. Mr. J. E. Greiner was called upon as consulting engineer in connection with the design of the superstructure for this bridge and upon his recommendation the width of the bridge was increased. This made it necessary to increase the width of the masonry to correspond with the increased width of the superstructure. The work on the masonry, as completed, presents a pleasing and substantial appearance and the contractors, as well as the engineers in immediate charge of the work, are to be commended upon the results secured.

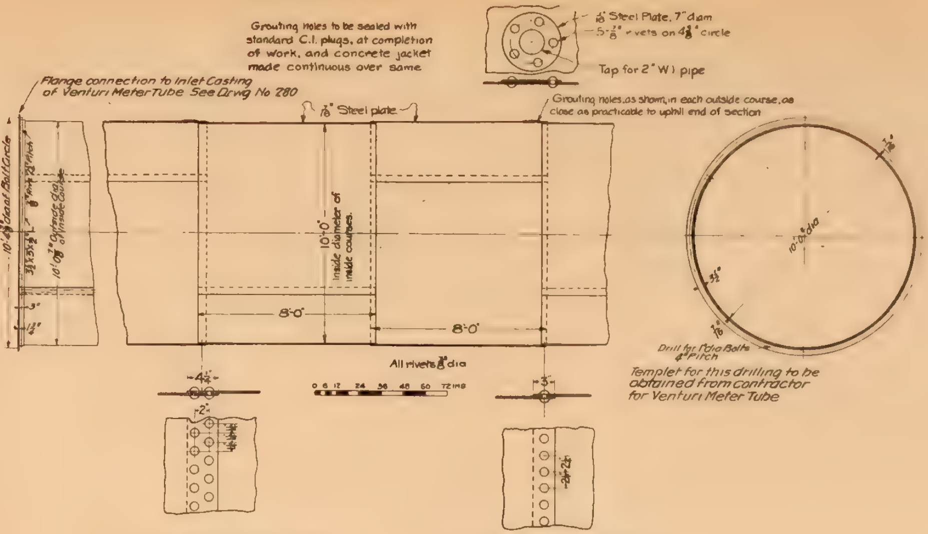
Contracts Nos. 3 and 5—Steel Pipe Conduit and Venturi Meter Tube.

Contract No. 3 was awarded to Mason, Hilton & Company of New York City on December 11, 1912, but no work was really done until after the first of the year. This contract included 2,465 feet of steel


1:12
Soil dressing
Earth and Rock Refill
Approximate
18
18
1:1½
Original Surface
1:3:6 Concrete
6'-7" R.
10'-0"
Inside diameter of inside courses
21
12
2'-6"
2¼" for plain mortar lining See specifications for description of reinforced lining.
Excavation and masonry shall be measured for payment to this line, beyond which no rock shall project more than 8 inches, nor so as to interfere with riveting and caulking
6:1
6:1
1:4
Half section of joint holes shown dotted
Excavation and masonry shall be measured for payment to this line, beyond which no rock shall project

SECTION IN ROCK CUT.

SCALE :- ½ INCH = 1 FOOT.

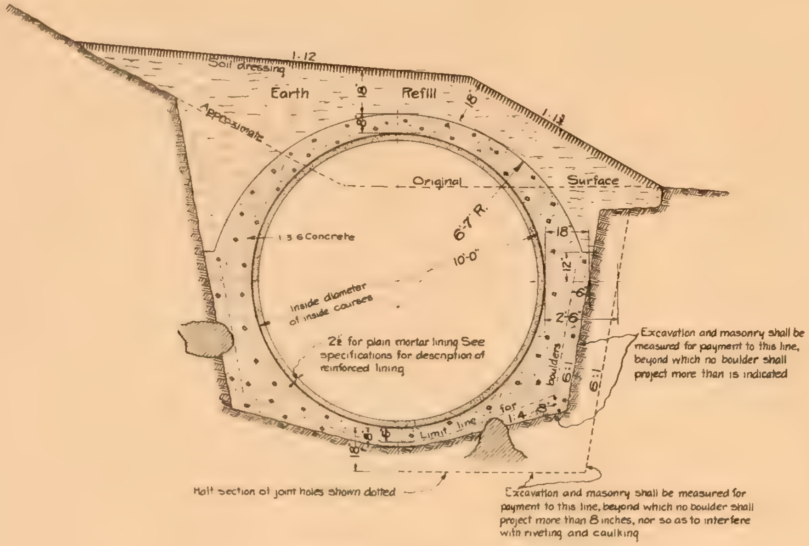

Grouting holes to be sealed with standard C.I. plugs, at completion of work, and concrete jacket made continuous over same
⅞" Steel Plate, 7" diam
5-⅞" rivets on 4⅜" circle
Tap for 2" W.I. pipe
Flange connection to Inlet Casting of Venturi Meter Tube See Drwg No 280
⅞" Steel plate
Grouting holes, as shown, in each outside course, as close as practicable to uphill end of section
10'-4⅜" diaof Bolt Circle
3½x3x½
10'-0⅞" Outside dia of inside Course
3"
1¾"
10'-0" Inside diameter of inside courses.
8'-0"
8'-0"
All rivets ⅞" dia
4½"
2"
3"
2½"
10'-0⅞" dia
3½"
⅞"
Drill for 1" dia Bolts 4" Pitch
Templet for this drilling to be obtained from contractor for Venturi Meter Tube
0 6 12 24 36 48 60 72 INS

This joint for all longitudinal joints; also for all circumferential joints at stream crossings and 4 joints beyond each end of same, and all circumferential joints at horizontal or vertical bends in conduit and 4 joints beyond points of tangency

This joint for all circumferential joints not at stream crossings or at bends in conduit.

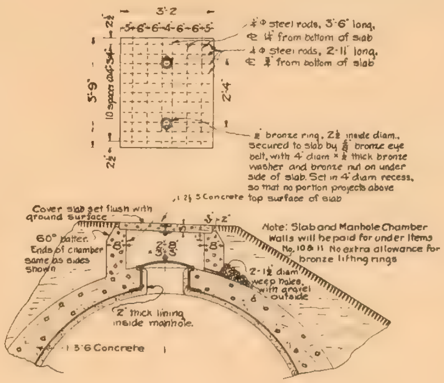
DETAILS OF STEEL PIPE.

SCALES :- ⅜ & 1½ INCHES = 1 FOOT


1:12
Soil dressing
Earth Refill
Approximate
18
18
1:1½
Original Surface
1:3:6 Concrete
6'-7" R.
10'-0"
Inside diameter of inside courses
18
12
2'-6"
2¼" for plain mortar lining See specifications for description of reinforced lining
boulders
Excavation and masonry shall be measured for payment to this line, beyond which no boulder shall project more than is indicated
6:1
6:1
1:4
Limit line for
Half section of joint holes shown dotted
Excavation and masonry shall be measured for payment to this line, beyond which no boulder shall project more than 8 inches, nor so as to interfere with riveting and caulking

SECTION IN EARTH CUT

SCALE :- ½ INCH = 1 FOOT.

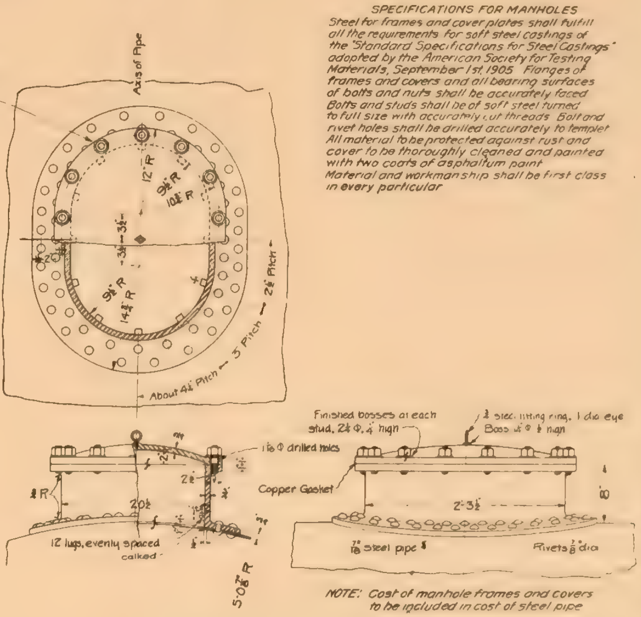

3'-2
5-6-6-4-6-6-5
2½
5'-9"
10 spaces at 5¼"
2'-4"
2½
¾" Φ steel rods, 3'-6" long, ℄ 1¼" from bottom of slab
½ Φ steel rods, 2'-11" long, ℄ ¾" from bottom of slab
⅞" bronze ring, 2¼ inside diam., secured to slab by ⅝" bronze eye bolt, with 4" diam × ⅛ thick bronze washer and bronze nut on under side of slab. Set in 4" diam recess, so that no portion projects above top surface of slab
1:2½:5 Concrete
Cover slab set flush with ground surface
60° batter. Ends of chamber same as sides shown
8
2'-8"
3'-3"
8
3'-2"
Note: Slab and Manhole Chamber walls will be paid for under items No. 10 & 11 No extra allowance for bronze lifting rings
2-1½" diam weep holes, with gravel outside
2" thick lining inside manhole.
1:3:6 Concrete

SECTION THROUGH MANHOLE CHAMBER.

SCALE :- ½ INCH = 1 FOOT.

SPECIFICATIONS FOR MANHOLES

Steel for frames and cover plates shall fulfill all the requirements for soft steel castings of the "Standard Specifications for Steel Castings" adopted by the American Society for Testing Materials, September 1st, 1905. Flanges of frames and covers and all bearing surfaces of bolts and nuts shall be accurately faced. Bolts and studs shall be of soft steel turned to full size with accurately cut threads. Bolt and rivet holes shall be drilled accurately to templet. All material to be protected against rust and cover to be thoroughly cleaned and painted with two coats of asphaltum paint. Material and workmanship shall be first class in every particular


14-1"Φ Steel Studs with bronze nuts evenly spaced as shown
Axis of Pipe
12" R
3½ R
10⅞ R
3½ R
14⅞ R
2¼ Pitch
3 Pitch
About 4¼ Pitch
Finished bosses at each stud, 2¼ Φ, ¼ high
¾ steel lifting ring, 1 dia eye Boss ¼ Φ ⅛ high
1⅛ Φ drilled holes
Copper Gasket
20½
2'-3½
12 lugs, evenly spaced calked
⅞ steel pipe
Rivets ⅞ dia
5'-0⅞ R
0 3 6 9 12 24 36 INS

NOTE: Cost of manhole frames and covers to be included in cost of steel pipe

DETAILS OF CAST STEEL MANHOLE.

SCALE :- 1½ INCHES = 1 FOOT

4 Required

FILE No 604-A 35

DRAWN L.S.
TRACED L.S.
CHECKED S.P.
CORRECT

BALTIMORE CITY WATER DEPARTMENT - GUNPOWDER SUPPLY IMPROVEMENTS

STEEL PIPE CONDUIT, SECTIONS AND DETAILS

7 SHEETS. SHEET NO. 4

SCALES: 3/8", 1/2" & 1 1/2" = 1 FOOT

APPROVED Ezra B. Whitman WATER ENGINEER

CONTRACT NO. 3

SERIAL ~~NO. 265~~
FILED ~~53-A-4~~
DATE SEPT 5 1912

pipe ten feet in diameter and seven sixteenths of an inch in thickness. The total weight of the pipe was 1,600,000 pounds. After the excavation of the pipe was completed, concrete cradles of the diameter of the pipe were placed in the trench 7½ feet apart on tangents and 6.98 feet apart on curves. The steel pipe work was sub-let to the Riter-Conly Manufacturing Company of Pittsburgh, Pa. The steel pipe was placed on these cradles and riveted together. After the pipe was riveted together, it was filled with water and tested to the maximum pressure under which it will operate after the high dam is completed. All leaks were caulked with the pipe under pressure, and after these leaks were stopped a concrete casing was placed around the pipe in the manner shown on the accompanying Drawing No. 53-A-4.

When the water was first placed in the pipe the lateral pressure caused the pipe to flatten out in some places almost as much as a foot. As the pressure was increased, however, the pipe came back nearly to its normal shape, the maximum deformation being from three inches to four inches. It was in this shape when the concrete casing was placed and pressure was kept on the pipe during the whole time of the placing of the concrete.

After the outer casing of concrete has been placed the pipe was then drained and the interior surface of the steel conduit was covered with 1½ inches of mortar, placed by means of a cement gun, which mortar was reinforced with wire fabric. The placing of the cement mortar lining was sublet to the New York Cement Gun Company of New York City.

Several hundred feet below the dam a Venturi meter was placed in this conduit for measuring the flow of water to the city. The interior diameter of the throat of this meter in forty-five inches and the length of the Venturi meter tube is ninety-one feet. This Venturi meter tube and the throat and up-stream castings were furnished by the Builders Iron Foundry Company of Providence, R. I., while Mason, Hilton & Company, under their contract, placed this meter and lined the tube with mortar in a similar manner to that in which the conduit was lined.

This contract was completed in December on contract time. The entire contract was handled in a workmanlike manner from start to finish, with the exception of part of the cement lining. While the side walls and roof of the conduit are put on fairly smooth, the work on the invert has been a disappointment. In a number of places in the invert the rebound was covered over by the cement gun, and the men walking over the invert before it was set caused a considerable amount of roughness. By sounding with a hammer, these places where the rebound was covered with mortar were discovered and these have been cut out and refilled with solid mortar.

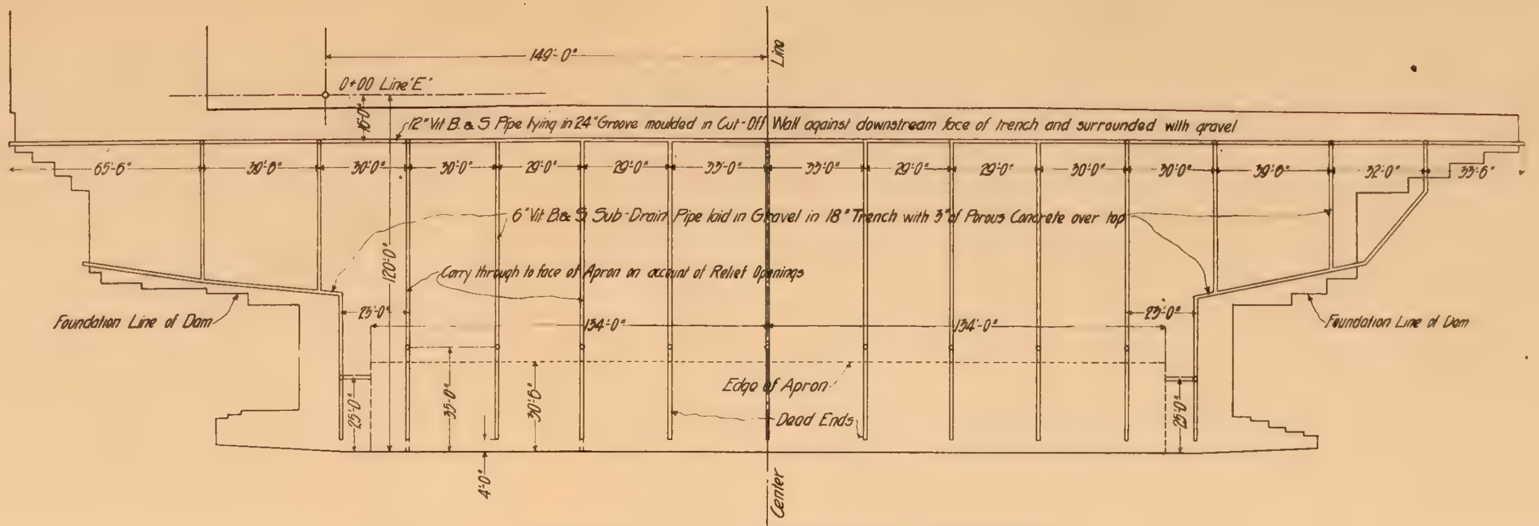
Contract No. 6—Superstructure for Bridge No. 1.

This contract was let to the Roanoke Bridge Company of Roanoke, Va., on March 12.

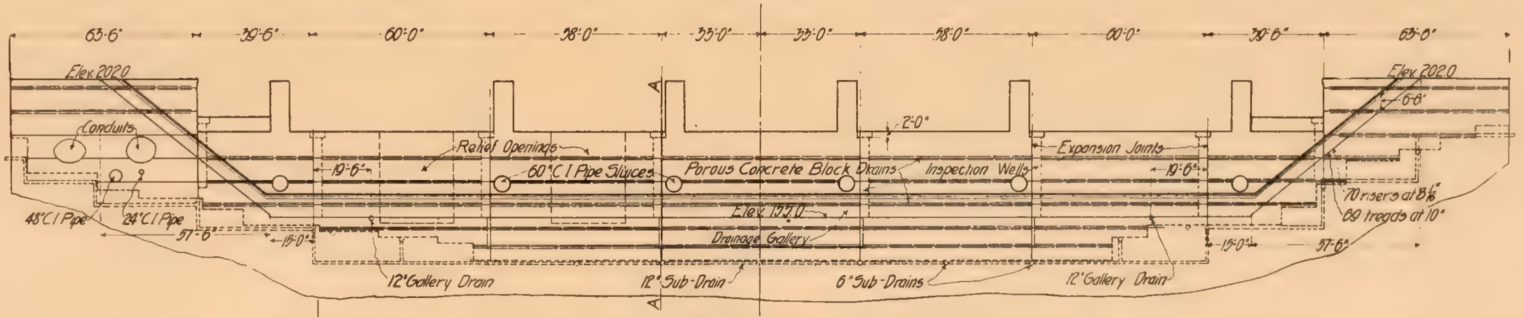
Through fear of freshets in the Gunpowder River it was decided by these contractors not to build the ordinary false work, but to build the false work in the form of a suspension bridge. Twelve 1½-inch cables were stretched across the river and the ends of each cable are anchored to two 10-foot to 12-foot eye bars set in holes drilled in the rock back of each abutment. These eye bars were then grouted in and inside the excavation pit, just above the rock, a reinforced concrete slab 18 inches thick was placed over these eye bars. On these twelve cables two timber catenary trusses were built and upon these catenary trusses the bridge is being erected. The cables pass through holes drilled in the back walls of the abutments and rest on saddles of cast iron placed on the bridge seats on the abutments and on top of the pier. The work on the anchorages for these cables was begun in July, but the excavation and drilling of holes for the eye bar anchors was not completed until November. A great deal of difficulty was experienced in drilling the holes to receive the anchor bolts and it would have been much cheaper for the contractor had he excavated the rock to a depth of ten or twelve feet and then surrounded the eye bars with concrete filled in this excavation.

The steel for the bridge began to arrive on the ground on September 19 and was all delivered by December 15. The entire contract should have been completed in November to have been completed on contract time.

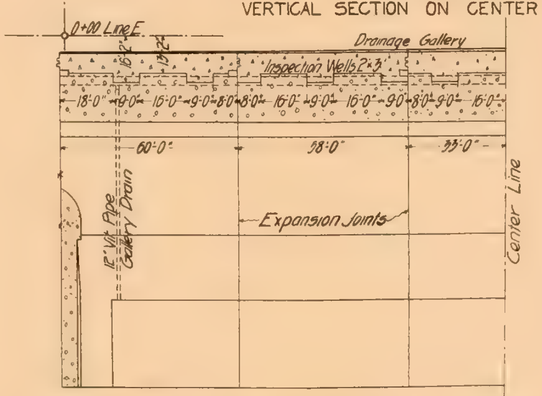
The contractors claim that they have had a great deal of trouble in securing competent labor and that the unforeseen difficulties in securing proper anchorages for the cables greatly retarded the work, and there is no doubt but that these difficulties were real ones. The total weight of this bridge will be about 950,000 pounds and the flooring will be laid on creosoted oak lumber.


149'-0"
Line
0+00 Line 'E'
16'-0"
12" Vit. B. & S. Pipe lying in 24" Groove moulded in Cut-Off Wall against downstream face of trench and surrounded with gravel
65'-6"
39'-0"
30'-0"
30'-0"
29'-0"
29'-0"
33'-0"
33'-0"
29'-0"
29'-0"
30'-0"
30'-0"
39'-0"
32'-0"
33'-6"
6" Vit. B. & S. Sub-Drain Pipe laid in Gravel in 18" Trench with 3" of Porous Concrete over top
120'-0"
Carry through to face of Apron on account of Relief Openings
Foundation Line of Dam
25'-0"
134'-0"
134'-0"
29'-0"
Foundation Line of Dam
Edge of Apron
Dead Ends
25'-0"
35'-0"
30'-6"
25'-0"
4'-0"
Center

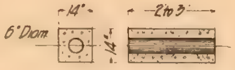
FOUNDATION PLAN OF DAM SHOWING LOCATION OF SUB-DRAINS


63'-6"
39'-6"
60'-0"
58'-0"
33'-0"
33'-0"
58'-0"
60'-0"
39'-6"
63'-0"
Elev. 202.0
Elev. 202.0
A
6'-0"
2'-0"
Conduits
Relief Openings
Expansion Joints
19'-6"
60" C.I. Pipe Sluices
Porous Concrete Block Drains
Inspection Wells
19'-6"
70 risers at 8⅛"
69 treads at 10"
48" C.I. Pipe
24" C.I. Pipe
Elev. 155.0
57'-6"
15'-0"
Drainage Gallery
15'-0"
57'-6"
12" Gallery Drain
12" Sub-Drain
6" Sub-Drains
12" Gallery Drain
A

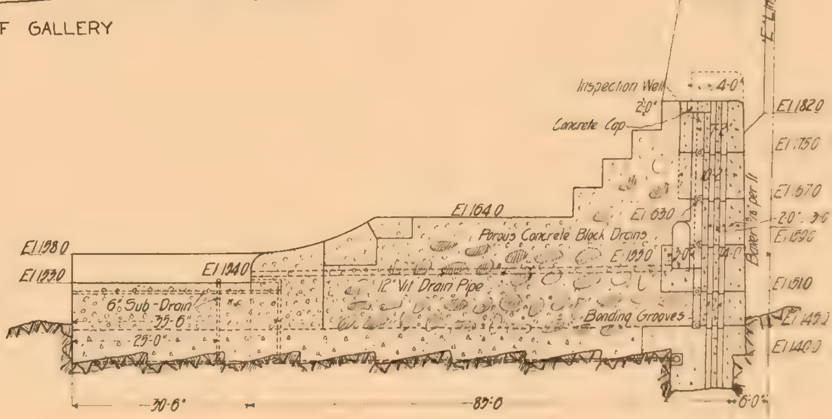
VERTICAL SECTION ON CENTER LINE OF GALLERY


0+00 Line E
Drainage Gallery
Inspection Wells 2'x3'
18'-0"
9'-0"
16'-0"
9'-0"
8'-0"
8'-0"
16'-0"
9'-0"
16'-0"
9'-0"
8'-0"
9'-0"
16'-0"
60'-0"
58'-0"
33'-0"
12" Vit. Pipe Gallery Drain
Expansion Joints
Center Line

HORIZONTAL SECTION OF DAM AT ELEVATION 170.0


6" Diam.
14"
14"
2 to 3'

DETAIL OF POROUS CONCRETE
BLOCK DRAIN
Scale ½ inch = 1 foot


El. 201.5
E Line
Inspection Well
4'-0"
2'-0"
El. 182.0
Concrete Cap
El. 175.0
El. 167.0
Batter ⅛ per 11
El. 164.0
El. 163.0
2'-0"
3'-0"
El. 159.0
Porous Concrete Block Drains
El. 198.0
El. 193.0
El. 194.0
El. 155.0
3'-0"
4'-0"
12" Vit. Drain Pipe
El. 151.0
6" Sub-Drain
35'-6"
Bonding Grooves
El. 145.0
25'-0"
El. 140.0
30'-6"
85'-0"
6'-0"

SECTION A-A

FILE No. 604-A-17.

DRAWN
TRACED
CHECKED
CORRECT

BALTIMORE CITY WATER DEPARTMENT - GUNPOWDER SUPPLY IMPROVEMENTS

DRAINAGE SYSTEM

SCALE: 1 INCH = 10 & 20 FEET

APPROVED Ezra B. Whitman WATER ENGINEER

9 SHEETS, SHEET NO. 3

CONTRACT NO. 1

SERIAL NO. 190
FILED 51-A-32
DATE 2-8-12

Contract No. 7—Road No. 1.

This contract, for the construction of 1.9 miles of road along the west side of the Loch Raven Valley, was awarded to Thomas Mullan on April 30, 1913.

This road will take the place of the old lake drive which runs along the west bank of the old Loch Raven. This road will be constructed at such an elevation that it will be above the waters of the proposed high dam, having a crest elevation of 237 feet A. M. T. It was at first proposed to make this road skirt the edge of the lake in the same manner that the old road does, but it was found that the cost of following the edge of the lake would be excessive owing to the fact that the road would have been located on a very steep, sloping hillside, with rock outcropping along the entire surface. It was therefore decided to leave the lake for a part of the route, which shortened the length of this drive by one mile and probably cut the cost of the road in half.

Work on this contract was begun the first part of June. Owing to the fact that the work on the dam and the steel pipe conduit interfered with the construction of this roadway at the lower end, this contract was not pushed, as it would have been impossible to complete the lower end of this roadway. It was also deemed advisable to allow the fills to settle throughout the winter before the road material was placed on them. The contract time for completion of this work was therefore extended until forty days after the first of April in the year 1914.

The culverts for the roadway have all been completed, excepting the one at Rushbrook, and the grading was practically completed before the end of the year.

Contract No. 15—Superstructure for Bridge No. 2.

This bridge is located about 4,400 feet above the present Meredith's Ford Bridge. The east end of the bridge will be connected to the Jarrettsville Turnpike near Mann's Hill and the west end will be connected with the Valley Road, running along the west side of the Gunpowder River and connecting to the Dulaney Valley Turnpike at the small village of Bosley. The location of this bridge is shown on the accompanying map.

The building of this bridge is the result of a number of conferences with the Baltimore County Commissioners and other interested parties living in the neighborhood of the new dam and using these roads. It had been proposed to build only Bridge No. 1 for the present, but owing to the protests of the people using the Jarrettsville and Dulaney Valley Pikes it was decided by the city to build the second bridge, so that the people using both these pikes would have the shortest possible route to Towson and to Baltimore city.

Bridge No. 2, which is also known as Mann's Hill Bridge, will be 954 feet over all and at the west end of the bridge there will be a fill about 400 feet in length, which will afford the approach to the west end of the bridge.

Mr. J. E. Greiner was called in as consulting engineer in connection with the design of this bridge and owing to the natural beauty of the location it was decided to make some attempt at ornamentation. This ornamentation will cost but very little more than a plain bridge and the greater harmony between the bridge structure and its beautiful surroundings is certainly worth the small amount of money the city will expend to increase the attractiveness of this bridge. No attempt has been made at any elaborate ornamentation, but the appearance of the bridge is a great improvement over the appearance of Bridge No. 1, erected at Peterson's Run.

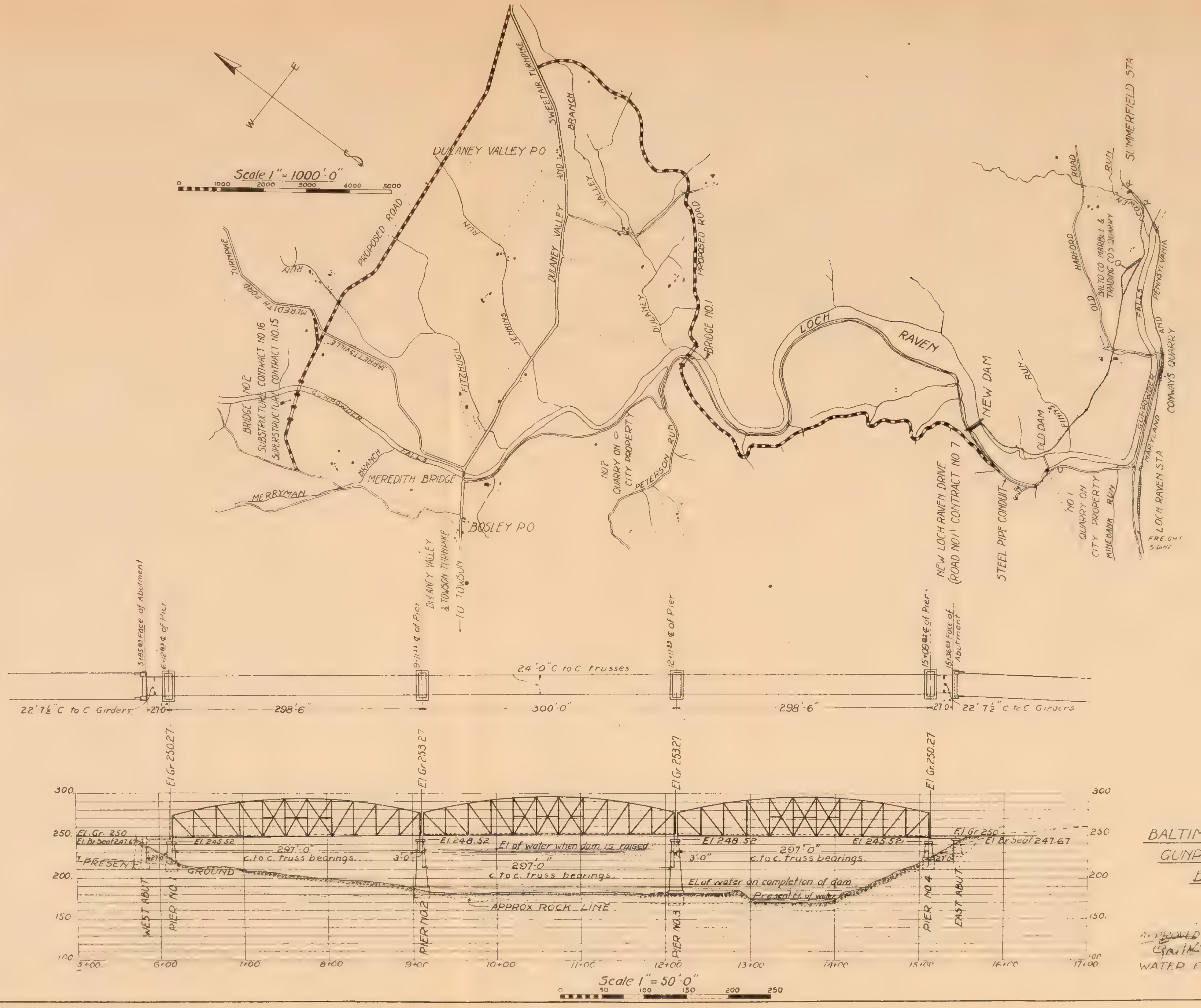
The contract for this bridge was let to the McClintic-Marshall Company of Philadelphia on September 17, 1913. Shop drawings have been approved and the steel work is being manufactured in the shops.

Contract No. 16—Sub-structure for Bridge No. 2.

The contract for the sub-structure of Bridge No. 2 was let to Stewart-Jones Company and Claiborne, Johnston & Company on June 11.

Mr. J. E. Greiner was again called in as consulting engineer for the sub-structure and upon his recommendation the design of the sub-structure was changed in such a manner that the cost of the concrete work was considerably increased. The greatly improved appearance of the completed structures, however, was certainly worth the additional cost of these sub-structures.

A cable-way was used for constructing this sub-structure work; the cable being supported by two towers 1,046 feet apart. The west tower was 102 feet high and the east tower 76 feet high. The sag of the cable was practically 48 feet and it cleared the top of the middle piers by about 33 feet. The west abutment was 40 feet high above the foundation. The first pier was practically the same height. The second pier was practically 75 feet high from the foundation to the top. The third pier was about 80 feet high. The fourth pier was 42 feet in height and the east abutment was about 25 feet in height.


Scale 1" = 1000'-0"
0 1000 2000 3000 4000 5000
DULANEY VALLEY PO
PROPOSED ROAD
SWEETAIR TURNPIKE
BRANCH
VALLEY
DULANEY VALLEY AND
RUN
JENKINS
FITZHUGH
MEREDITH FORD TURNPIKE
RUN
JARRETTSVILLE
GUNPOWDER
BRIDGE NO 2
SUBSTRUCTURE CONTRACT NO 16
SUPERSTRUCTURE CONTRACT NO 15
BRANCH
FALLS
MEREDITH BRIDGE
MERRYMAN
BOSLEY PO
DULANEY VALLEY & TOWSON TURNPIKE
TO TOWSON
DULANEY
PROPOSED ROAD
BRIDGE NO 1
NO 2 QUARRY ON CITY PROPERTY
PETERSON RUN
LOCH RAVEN
NEW DAM
NEW LOCH RAVEN DRIVE (ROAD NO 1) CONTRACT NO 7
STEEL PIPE CONDUIT
RUN
FINNS
OLD DAM
NO 1 QUARRY ON CITY PROPERTY
MINEBANK RUN
ROAD
RUN
SUMMERFIELD STA
OLD HARFORD
BALTO CO MARBLE & TRADING CO'S QUARRY
NORTHERN
CENTRAL
PENNSYLVANIA
FALLS
AND
GUNPOWDER
MARYLAND
CONWAY'S QUARRY
LOCH RAVEN STA
FREIGHT SIDING
5+65.83 Face of Abutment
6+12.83 ℄ of Pier
9+11.33 ℄ of Pier
12+11.33 ℄ of Pier
15+09.83 ℄ of Pier
15+36.83 Face of Abutment
24'-0" C to C trusses
22' 7½" C to C Girders
27'0"
298'-6"
300'-0"
298'-6"
27'0"
22' 7½" C to C Girders
El Gr 250.27
El Gr 253.27
El Gr 253.27
El Gr 250.27
300
250
200
150
100
El Gr 250
El Br Seat 247.67
El 245.52
El 248.52
El 248.52
El 245.52
El Gr 250
El Br Seat 247.67
297'-0" c to c truss bearings
297'-0" c to c truss bearings
297'-0" c to c truss bearings
3'0"
3'0"
27'0"
27'0"
El of water when dam is raised
El of water on completion of dam
Present El of water
PRESENT GROUND
APPROX ROCK LINE
WEST ABUT
PIER NO 1
PIER NO 2
PIER NO 3
PIER NO 4
EAST ABUT
5+00
6+00
7+00
8+00
9+00
10+00
11+00
12+00
13+00
14+00
15+00
16+00
17+00
Scale 1" = 50'-0"
0 50 100 150 200 250

FILE No. 604-A-5.

BALTIMORE CITY WATER DEPARTMENT

GUNPOWDER SUPPLY IMPROVEMENTS

BRIDGE NO 2 LOCH RAVEN

CONTRACT NO. 15

SITUATION PLAN

APPROVED
[illegible]
WATER ENGINEER

J E GREINER [illegible]
BALTIMORE MD [illegible]
SERIAL [illegible]

FILED ~~53-A-34~~

The west abutment and the first pier were founded on clay with a spread foundation, while the other piers and the east abutment were founded on limestone rock.

The work on this contract has been done in a very satisfactory manner and the results obtained are very pleasing.

By the end of the year the west abutment and the first three piers were completed and the east abutment was well under way and the foundation for the fourth pier was ready for concrete.

On September 30, Stewart-Jones Company withdrew from the work, leaving the completion to Claiborne, Johnston & Company.

Contract No. 17—Distribution Mains.

This contract, for the construction of the distribution mains connecting the filtration plant with the existing city mains, was let on December 31, 1913, to the Lock Joint Pipe Company of New York.

The existing tunnel between Lakes Montebello and Clifton could have been used for part of the connecting link had it been constructed in such a manner as to have made it possible. This old tunnel, however, was built for a gravity flow between Lake Montebello and Lake Clifton and as the elevation of the water surface of the filtered water reservoirs is 213 feet, or 50 feet A. M. T. higher than the water in Lake Montebello, this tunnel would have been placed under a pressure for which it was not designed.

The cost of building an entirely new conduit from the filtration plant to Clifton Gate House was investigated and compared with the cost of building a pressure tunnel inside of the existing 12-foot tunnel between Lake Montebello and Lake Clifton. By building a pressure tunnel nine feet in diameter inside of the existing tunnel the cost of excavation was done away with and it was decided to build the new tunnel inside of the old one. This construction work, however, will have to be done at the same time the city is being supplied with water which must flow through this conduit.

This will be accomplished by filling Lake Clifton with water, which holds between three and four days' supply for the city. After the lake is filled, the water will be drained from the conduit and the contractors will work day and night, placing the new pressure conduit inside of the old one, for a period of from two to three days. Then the contractors must withdraw from the tunnel and allow the water to flow from Lake Montebello to Lake Clifton until it is again filled. Then this operation will be repeated until the new pressure conduit is completed inside of the old gravity conduit.

After witnessing a number of tests made by the Lock Joint Pipe Company of reinforced concrete pipe under pressure, which test not only included the test of the pipe itself but the joint devised by this company, it was decided to call for alternate bids on this contract for the use of either steel pipe conduit or reinforced concrete conduit.

The conditions under which this new pressure conduit is to be built are ideal for the use of reinforced concrete. For the building of this new conduit in the old one, which has been completed for over thirty years, will give the reinforced concrete conduit an absolutely solid foundation, so that there will be no danger of settlement such as might be experienced in excavated trenches and the temperature in this old tunnel will vary very little even during the course of construction, while the temperature changes during construction in an open cut would be very material.

This large reinforced conduit under a pressure of nearly 35 pounds, built of separate pieces of concrete with joints every six feet, is practically the first conduit of its kind to be built within the knowledge of the writer.

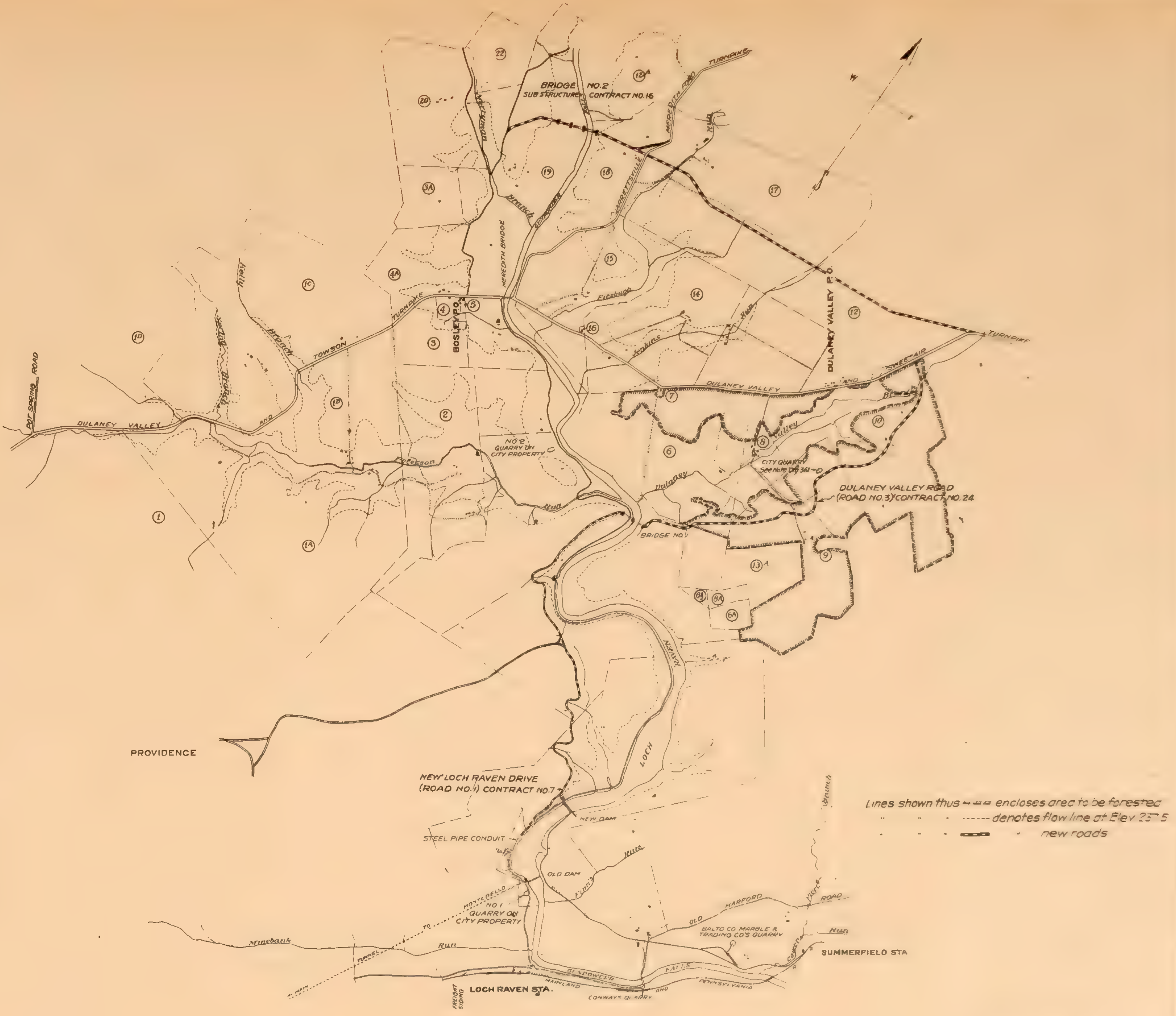
By allowing the use of the reinforced concrete in competition with the steel, the city was able to save $127,000.

Contract No. 24—Road No. 3.

This contract is for the building of a road from the east end of Bridge No. 1 to the Dulaney Valley and Sweet Air Turnpike and was awarded to Thomas Mullan on September 24. Bids were asked for concrete roadway in competition with macadam as it is believed that the experience in other places warrants the building of concrete roadways rather than macadam, although the concrete may be considerably more expensive in first cost. The ordinary macadam road, however, does not stand up well under automobile traffic and it was anticipated that the saving in the maintenance by the use of concrete would more than offset the additional first cost. This additional first cost, however, proved to be comparatively small, the bid for the concrete roadway being only $2,892.96 more than the cost for the macadam roadway.

Some little work on the grading and the establishing of a crusher plant in one of the city's quarries is all that has been accomplished on this contract by the end of the year.

The following is a tabulation of the contracts carried out under the work of the Gunpowder Supply Improvement Division during the year:


BRIDGE NO.2
SUB STRUCTURE CONTRACT NO.16
TURNPIKE
MEREDITH FORD
Run
Branch
MEREDITH BRIDGE
BOSLEY P.O.
TOWSON
TURNPIKE
Fitzhugh
Jenkins
Run
DULANEY VALLEY P.O.
TURNPIKE
SWEET AIR
DULANEY VALLEY
AND
POT SPRING ROAD
DULANEY VALLEY
AND
Peterson
Run
NO 2 QUARRY ON CITY PROPERTY
Dulaney
Valley
CITY QUARRY
DULANEY VALLEY ROAD
(ROAD NO.3) CONTRACT NO.24
BRIDGE NO.1
PROVIDENCE
NEW LOCH RAVEN DRIVE
(ROAD NO.1) CONTRACT NO.7
NEW DAM
STEEL PIPE CONDUIT
LOCH
RAVEN
OLD DAM
MONTEBELLO
NO 1 QUARRY ON CITY PROPERTY
Minebank
Run
OLD HARFORD ROAD
BALTO CO MARBLE & TRADING CO'S QUARRY
Run
SUMMERFIELD STA
GUNPOWDER
FALLS
MARYLAND
AND
PENNSYLVANIA
LOCH RAVEN STA.
FREIGHT SIDING
CONWAYS QUARRY
1
1A
1B
1C
1D
2
3
3A
4
4A
5
6
6A
7
8
8A
9
10
12
12A
13A
14
15
16
17
18
19
20
22
Lines shown thus encloses area to be forested
" " " denotes flow line at Elev 235
" " " " new roads

FILE NO. 60- 4 53

DRAWN GES
TRACED G.E.S.
CHECKED S P
CORRECT

BALTIMORE CITY WATER DEPARTMENT GUNPOWDER SUPPLY IMPROVEMENTS
MAP OF ROADS IN THE VICINITY OF LOCH RAVEN

6 SHEETS. SHEET NO. 1

SCALE:- 1 INCH = 1000 FEET

APPROVED Geo. W. Whitman WATER ENGINEER

CONTRACT NO. 24

SERIAL ~~NO. 268~~
FILED ~~53-A-7~~
DATE SEPT 5 '22

TABULATION OF CONTRACTS AWARDED, GUNPOWDER SUPPLY IMPROVEMENT DIVISION TO DECEMBER 31, 1913.

Contract Number.	Contractors.	Contract Price.	Value of Work to December 31.	Percentage of Work Done.	Character of Work.
1	King-Ganey Contracting Company.........	$374,884 40	$371,039 50	90 per cent.	New Loch Raven Dam.
2	Singer-Pentz Company—Williams & Straus, sub-contractors	19,912 80	25,701 62	100 per cent.	Masonry for Bridge No. 1.
3	Mason-Hilton Company	143,190 80	157,555 90	100 per cent.	Steel pipe conduit.
5	Builders' Iron Foundry..................	5,420 00	4,320 00	80 per cent.	Venturi meter.
6	Roanoke Bridge Company...............	50,915 00	38,675 34	76 per cent.	Bridge No. 1.
7	Thomas Mullan.......................	47,649 50	22,525 18	48 per cent.	Road No. 1.
8	Coffin Valve Company..................	3,246 00	3,246 00	100 per cent.	Sluice gates.
10	Coffin Valve Company..................	1,620 00	1,620 00	100 per cent.	Gate valves.
15	McClintic-Marshall Company..............	86,750 00	No payment.	Shop work underway.	Bridge No. 2.
16	Stewart-Jones Company and Claiborne, Johnston & Co.......................	*24,785 00 †28,785 00	25,565 14	90 per cent.	Masonry Bridge No. 2.
17	Lock Joint Pipe Company...............	‡225,924 97	....	....	Distribution mains.
24	Thomas Mullan	31,566 91	2,494 81	8 per cent.	Road No. 3.

*Original.

†By later agreement.

‡Awarded December 31.

NOTE—Contract No. 1 extended to cover additional concrete for future extension of dam.

NOTE—Contract No. 2, subsequent to award, plans changed to cover wider bridge, increasing amount of masonry.

NOTE—Contract No. 16, plans revised subsequent to award, increasing cost of concrete.

Respectfully submitted,

Ezra B. Whitman, *President*,
Richard Bernard, John Sterkel,
Telfair W. Marriott, Charles W. Jones,

Water Board of Baltimore City.

BALTIMORE CITY WATER DEPARTMENT. GUNPOWDER SUPPLY IMPROVEMENTS.

Tabulation of Bids for Construction of New Loch Raven Dam—Contract No. 1. Bids Opened March 6, 1912. Approved, EZRA B. WHITMAN, *Water Engineer*.

Items.	Item Number	Quantities.	C. B. Clark & Co., Baltimore, Md.		King-Ganey Contracting Co., New York, N. Y.		Lane Brothers Co., Alta Vista, Va.		T. J. Forchner Contracting Co., Mt. Vernon, N. Y.		Fisher & Carozza, Baltimore, Md.		The T. A. Gillespie Company, New York, N. Y.		James Stewart & Co., New York, N. Y.		J. F. Cogan & Co., New York, N. Y.		Sanford & Brooks Company, Baltimore, Md.		Maryland Dredging and Contracting Co., Baltimore, Md.		B. F. Sweeten & Son, Baltimore, Md.		W. M. Kefauver Company, Baltimore, Md.		Engineer's Estimate.	
			Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.
Clearing and grubbing	1	1.04 acres		$50.00		$125.00		$100.00		$100.00		$156.00		$100.00		$140.00		$25.00		$140.00		$100.00		$100.00		$200.00		$150.00
Furnishing material for cofferdam and erecting, maintaining and removing same, as a lump sum	2			68,200.00		56,000.00		40,800.00		65,000.00		70,000.00		40,000.00		50,000.00		28,000.00		89,000.00		125,000.00		144,000.00		75,000.00		46,000.00
Earth excavation to foundation	3	12,660 cu. yds.	$0.85	10,761.00	$0.90	11,394.00	$0.72	9,115.20	.70	8,862.00	$1.43	18,103.80	$0.50	6,330.00	$1.05	13,293.00	$2.90	36,714.00	$1.10	13,926.00	$0.80	10,128.00	$1.50	18,990.00	$2.00	25,320.00	$1.00	12,660.00
Loose rock excavation for foundation	4	7,800 cu. yds.	1.50	11,700.00	1.30	10,140.00	1.05	8,190.00	1.00	7,800.00	1.63	12,714.00	1.50	11,700.00	1.40	10,920.00	2.90	22,620.00	1.56	12,168.00	1.20	9,360.00	2.00	15,600.00	3.00	23,400.00	1.50	11,700.00
Solid rock excavation to foundation	5	17,000 cu. yds.	2.20	37,400.00	1.30	22,100.00	1.45	24,650.00	1.75	29,750.00	2.00	34,000.00	2.00	34,000.00	1.75	29,750.00	2.90	49,300.00	1.90	32,300.00	2.40	40,800.00	3.50	59,500.00	4.00	68,000.00	2.50	42,500.00
Solid rock excavation for cut-off and drain trenches	6	4,600 cu. yds.	4.50	20,700.00	4.00	18,400.00	3.75	17,250.00	4.00	18,400.00	3.71	17,066.00	3.00	13,800.00	3.50	16,100.00	4.50	20,700.00	6.36	29,256.00	6.90	31,740.00	7.00	32,200.00	20.00	92,000.00	4.15	19,090.00
Drilling holes in rock for cement grout	7	300 lin. ft.	.50	150.00	.30	90.00	1.00	300.00	.50	150.00	1.00	300.00	.60	180.00	2.80	840.00	.30	90.00	.30	90.00	.80	240.00	1.00	300.00	1.00	300.00	.75	225.00
Furnishing and placing cement grout	8	1,000 bags cement	1.00	1,000.00	1.00	1,000.00	1.00	1,000.00	.50	500.00	1.00	1,000.00	1.30	1,300.00	1.20	1,200.00	1.00	1,000.00	.75	750.00	1.00	1,000.00	2.50	2,500.00	1.00	1,000.00	.80	800.00
Furnishing and placing wrought iron pipe for grouting	9	150 lin. ft.	.40	60.00	.20	30.00	.50	75.00	.30	45.00	.25	37.50	.30	45.00	2.10	315.00	.15	22.50	.15	22.50	1.00	150.00	.50	75.00	.20	30.00	.30	45.00
Furnishing and placing 12-inch vitrified pipe drain	10	750 lin. ft.	.50	375.00	.50	375.00	.65	487.50	.50	375.00	1.00	750.00	.50	375.00	.84	630.00	.50	375.00	.50	375.00	.70	525.00	.50	375.00	.50	375.00	.80	600.00
Furnishing and placing 6-inch vitrified pipe drains	11	1,570 lin. ft.	.30	471.00	.30	471.00	.35	579.50	.30	471.00	.75	1,177.50	.30	471.00	.35	549.50	.35	549.50	.38	596.60	.40	628.00	.35	549.50	.20	314.00	.50	785.00
Furnishing and placing gravel under dam	12	300 cu. yds.	2.00	600.00	2.50	750.00	2.50	750.00	1.75	525.00	2.00	600.00	2.00	600.00	2.80	840.00	2.50	750.00	2.50	750.00	1.80	540.00	2.50	750.00	2.00	600.00	2.00	600.00
Furnishing and placing porous concrete block drain	13	1,970 lin. ft.	.55	1,083.50	.50	985.00	.65	1,280.50	.75	1,477.50	1.30	2,561.00	.50	985.00	1.12	2,206.40	2.00	3,940.00	1.00	1,970.00	1.00	1,970.00	.75	1,477.50	1.00	1,970.00	1.00	1,970.00
1:3:6 concrete in cut-off walls and dam	14	17,100 cu. yds.	4.75	81,225.00	5.75	98,325.00	6.35	108,585.00	5.75	98,325.00	5.50	94,050.00	7.00	119,700.00	6.37	108,927.00	6.50	111,150.00	7.35	125,685.00	6.00	102,600.00	5.75	98,325.00	6.40	109,440.00	6.50	111,150.00
1:2½:5 concrete in dam, retaining walls and wing walls	15	24,500 cu. yds.	4.25	104,125.00	5.00	122,500.00	5.45	133,525.00	5.00	122,500.00	4.74	116,130.00	5.75	140,875.00	6.37	156,065.00	6.00	147,000.00	7.00	171,500.00	5.00	122,500.00	5.50	134,750.00	5.90	144,550.00	6.00	147,000.00
1:2:4 concrete around conduit	16	336 cu. yds.	9.50	3,192.00	8.00	2,688.00	6.95	2,335.00	8.00	2,688.00	14.40	4,838.40	8.00	2,688.00	8.40	2,822.40	7.50	2,520.00	15.00	5,040.00	10.00	3,360.00	7.00	2,352.00	7.00	2,352.00	12.00	4,032.00
Steel and iron bridge over spillway of dam, including piers	17			5,100.00		7,500.00		10,000.00		7,000.00		9,315.93		6,000.00		11,268.00		3,500.00		9,000.00		12,500.00		10,000.00		8,000.00		7,445.00
Placing 60-inch cast iron pipe	18	144 lin. ft.	4.00	576.00	2.60	374.40	2.35	338.40	3.00	432.00	5.00	720.00	7.00	1,008.00	14.00	2,016.00	6.00	864.00	10.00	1,440.00	10.00	1,440.00	5.00	720.00	20.00	2,880.00	2.00	288.00
Placing 60-inch sluice gates and appurtenances complete in back of dam	19	6	50.00	300.00	50.00	300.00	75.00	450.00	125.00	750.00	100.00	600.00	100.00	600.00	70.00	420.00	100.00	600.00	150.00	900.00	120.00	720.00	100.00	600.00	350.00	2,100.00	50.00	300.00
Furnishing and placing gratings to 60-inch sluice gates, 6 gratings	20	6	215.00	1,290.00	50.00	300.00	125.00	750.00	75.00	450.00	100.00	600.00	50.00	300.00	210.00	1,260.00	60.00	360.00	200.00	1,200.00	200.00	1,200.00	100.00	600.00	75.00	450.00	100.00	600.00
1:2:4 concrete in gate house substructure	21	2,940 cu. yds.	6.00	17,640.00	6.50	19,110.00	7.25	21,315.00	6.75	19,845.00	7.65	22,491.00	10.00	29,400.00	9.10	26,754.00	7.00	20,580.00	7.65	22,491.00	10.00	29,400.00	12.00	35,280.00	20.00	58,800.00	10.00	29,400.00
Placing 18-inch cast iron pipe for overflow	22	140 lin. ft.	3.00	420.00	2.60	364.00	1.75	245.00	2.50	350.00	4.50	630.00	8.00	1,120.00	11.20	1,568.00	5.00	700.00	7.00	980.00	9.00	1,260.00	3.00	420.00	18.00	2,520.00	3.00	420.00
Furnishing and placing steel embedded in gate house substructure and around conduit	23	21,000 lbs.	.03	630.00	.04	840.00	.02 75	577.50	.02 5	525.00	.04	840.00	.06	1,260.00	.04 2	882.00	.05	1,050.00	.03	630.00	.04	840.00	.05	1,050.00	.05	1,050.00	.03	630.00
Placing 24-inch cast iron drain pipe	24	190 lin. ft.	2.00	380.00	1.30	247.00	.75	142.50	1.00	190.00	3.50	665.00	3.00	570.00	4.20	798.00	4.00	760.00	5.00	950.00	3.00	570.00	3.00	570.00	12.00	2,280.00	1.00	190.00
Placing 24-inch drain line gate and appurtenances complete, gate house substructure	25	4	20.00	80.00	30.00	120.00	25.00	100.00	50.00	200.00	50.00	200.00	30.00	120.00	35.00	140.00	75.00	300.00	125.00	500.00	70.00	280.00	100.00	400.00	225.00	900.00	25.00	100.00
Placing rectangular sluice gate and appurtenances in gate house substructure	26	6	50.00	300.00	50.00	300.00	75.00	450.00	125.00	750.00	100.00	600.00	150.00	900.00	140.00	840.00	50.00	300.00	125.00	750.00	100.00	600.00	125.00	750.00	250.00	1,500.00	60.00	360.00
Furnishing and placing steel ladder in gate house substructure	27	112 lin. ft.		100.00		56.00		55.00		56.00		1.50		168.00		100.00		2.00		100.00		100.00		110.00		280.00	1.00	112.00
Total				$367,908.50		$374,884.40		$383,416.10		$387,516.50		$410,147.63		$414,595.00		$443,644.30		$453,772.00		$492,510.10		$499,551.00		$562,374.00		$625,611.00		$439,152.00
Time at $75 per day			300	22,500.00	400	30,000.00	300	22,500.00	450	33,750.00	300	22,500.00	300	22,500.00	350	26,250.00	375	28,125.00	400	30,000.00	400	30,000.00	500	37,500.00	300	22,500.00	400	30,000.00
Grand Total				$390,408.50		$404,884.40		$405,916.10		$421,266.50		$432,647.63		$437,095.00		$469,894.30		$481,897.00		$522,510.10		$529,551.00		$599,874.00		$648,111.00		$469,152.00

BALTIMORE CITY WATER DEPARTMENT—GUNPOWDER SUPPLY IMPROVEMENTS.

Tabulation of Bids for Construction of Masonry for Bridge No. 1—Contract No. 2.

Bids Opened October 16, 1912. Approved, Ezra B. Whitman, *Water Engineer*.

Items.	Item Number.	Quantity.	Lane Bros. Co., Inc. Altavista, Va.		Singer-Pentz Co., Inc. Baltimore, Md.		The Whiting-Turner Construction Co. Baltimore, Md.		The Concrete and Foundation Co. New York, N. Y.		Janon Fisher, Eccleston, Md.		Michael J. King, West Hoboken, N. J.		Standard Contracting Co. Baltimore, Md.		Engineer's Estimate.	
			Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.
Earth excavation	1	570 cu. yds.	$1 50	$855 00	$2 28	$1,299 60	$1 50	$855 00	$0 80	$456 00	$2 00	$1,140 00	$3 00	$1,710 00	$0 70	$399 00	$1 00	$570 00
Rock excavation	2	100 cu. yds.	2 00	200 00	2 50	250 00	2 50	250 00	1 60	160 00	5 00	500 00	6 00	600 00	3 80	380 00	2 00	200 00
1:2½:5 concrete in pier	3	1,040 cu. yds.	9 00	9,360 00	9 95	10,348 00	11 44	11,897 60	11 50	11,960 00	11 10	11,544 00	14 00	14,560 00	17 00	17,680 00	8 40	8,736 00
1:2½:5 concrete in west abutment and wings	4	500 cu. yds.	11 00	5,500 00	9 72	4,860 00	11 44	5,720 00	11 50	5,750 00	12 90	6,450 00	14 00	7,000 00	17 00	8,500 00	9 00	4,500 00
1:2½:5 concrete in east abutment and wings	5	160 cu. yds.	12 00	1,920 00	9 72	1,555 20	11 44	1,830 40	11 50	1,840 00	14 85	2,376 00	14 00	2,240 00	17 00	2,720 00	9 00	1,440 00
1:2:4 concrete in east abutment and wings	6	41 cu. yds.	14 00	574 00	10 00	410 00	12 05	494 05	11 50	471 50	15 00	615 00	20 00	820 00	17 00	697 00	10 20	418 20
Steel reinforcing bars in place	7	34,000 pounds.	03¼	1,105 00	03½	1,190 00	03½	1,190 00	05½	1,870 00	05	1,700 00	06	2,040 00	03	1,020 00	03½	1,190 00
Total				$19,514 00		$19,912 80		$22,237 05		$22,307 50		$24,325 00		$28,970 00		$31,396 00		$17,054 20
Time at $15 per day			100	1,500 00	70	1,050 00	65	975 00	45	675 00	90	1,350 00	90	1,350 00			100	1,500 00
Grand total				$21,014 00		$20,962 80		$23,212 05		$22,982 50		$25,675 00		$30,320 00				$18,554 20

BALTIMORE CITY WATER DEPARTMENT—GUNPOWDER SUPPLY IMPROVEMENTS.

Tabulation of Bids for Construction of Steel Pipe Conduit—Contract No. 3.

Bids Opened December 4, 1912. Approved, Ezra B. Whitman, *Water Engineer*.

Items	Item Number.	Quantities.	Mason-Hilton & Co., New York, N. Y.		Singer-Pentz Co., Baltimore, Md.		Jas. Ferry & Sons, Incorporated, Baltimore, Md.		The Snare & Triest Company, New York, N. Y.		S. M. Neff Co., New York, N. Y.		Ryan & Reilly Co., Baltimore, Md.		The Concrete and Foundation Co., New York, N. Y.		Lane Bros. Co., Baltimore, Md.		The Elkans-Tufts Construction Co., Baltimore, Md.		The Whiting-Turner Construction Co. Baltimore, Md.		The King-Ganey Contracting Co., New York, N. Y.		Engineer's Estimate.	
			Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total	Unit Price.	Total.
Earth excavation	1	8,000 cu. yds.	$0 85	$6,800 00	$0 75	$6,000 00	$2 00	$16,000 00	$0 90	$7,200 00	$0 80	$6,400 00	$1 50	$12,000 00	$1 80	$14,400 00	$0 50	$4,000 00	$1 50	$12,000 00	$1 35	$10,800 00	$2 00	$16,000 00	$1 00	$8,000 00
Rock excavation	2	6,000 cu. yds.	2 40	14,400 00	2 25	13,500 00	3 00	18,000 00	2 60	15,600 00	2 75	16,500 00	2 40	14,400 00	2 60	15,600 00	2 00	12,000 00	2 50	15,000 00	2 90	17,400 00	2 00	12,000 00	2 00	12,000 00
Sheeting or bracing left in trench	3	20,000 ft. B. M.	30 00	600 00	39 00	780 00	30 00	600 00	40 00	800 00	50 00	1,000 00	25 00	500 00	40 00	800 00	50 00	1,000 00	40 00	800 00	40 00	800 00	50 00	1,000 00	40 00	800 00
Backfill	4	3,700 cu. yds.	50	1,850 00	50	1,850 00	25	925 00	60	2,220 00	50	1,850 00	90	3,330 00	40	1,480 00	35	1,295 00	75	2,775 00	60	2,220 00	1 00	3,700 00	40	1,480 00
Topsoil removed and replaced on slopes	5	500 cu. yds.	1 05	525 00	1 50	750 00	1 00	500 00	1 40	700 00	1 00	500 00	2 25	1,125 00	1 00	500 00	75	375 00	1 00	500 00	1 00	500 00	1 25	625 00	1 00	500 00
Steel pipe in place	6	2,400 lin. ft.	25 00	61,600 00	28 70	70,716 80	27 00	66,528 00	26 50	65,296 00	25 00	61,600 00	25 20	62,092 80	29 00	71,456 00	31 60	77,862 40	25 00	61,600 00	27 00	66,528 00	39 00	96,096 00	30 00	73,920 00
1:3:6 concrete in casing	7	4,630 cu. yds.	7 10	32,873 00	6 60	30,558 00	6 00	27,780 00	7 20	33,336 00	7 50	34,725 00	7 50	34,725 00	7 25	33,567 50	8 25	38,197 50	12 00	55,560 00	9 00	41,670 00	6 50	30,095 00	7 10	32,873 00
Reinforced bridge, etc., Shanghai Creek	8			3,000 00		3,594 00		3,200 00		6,700 00		6,000 00		4,500 00		5,000 00		4,290 00		5,000 00		4,724 00		2,500 00		2,714 00
Reinforced bridge, etc., Towson Run	9			4,800 00		5,000 00		5,000 00		9,000 00		8,500 00		8,000 00		6,800 00		6,648 00		5,500 00		7,250 00		5,000 00		4,878 00
1:2½:5 concrete in casing adjacent to bridges and in meter vault	10	160 cu. yds.	8 00	1,280 00	7 23	1,156 80	10 00	1,600 00	9 20	1,472 00	8 00	1,280 00	9 00	1,440 00	7 55	1,208 00	8 50	1,360 00	13 00	2,080 00	9 20	1,472 00	9 00	1,440 00	3 20	512 00
Steel reinforcing bars in 1:2½:5 concrete	11	11,730 lbs.	04	469 20	03¼	381 23	05	586 50	04	469 20	04	469 20	04	469 20	04	469 20	03½	410 55	06	703 80	04	469 20	05	586 50	03½	410 55
Cement mortar lining, unreinforced	12	75,500 sq. ft.	18	13,590 00	13	9,815 00	15	11,325 00	15	11,325 00	25	18,875 00	25	18,875 00	21	15,855 00	30	22,650 00	15	11,325 00	27	20,385 00	20	15,100 00	13	9,815 00
Cement mortar lining, reinforced	...	76,750 sq. ft.	27	20,722 50	27	20,722 50	27	20 722 50	23	17,652 50	25	19,187 50	50	38,375 00	31	23,792 50	40	30,700 00	18	13,815 00	27	20,722 50	25	19,187 50		
Placing Venturi meter tube	13			700 00		2,000 00		1,000 00		1,200 00		500 00		1,500 00		500 00		3,000 00		1,000 00		500 00		2,000 00		500 00
Reinforced lining in meter tube	14	1,720 sq. ft.	40	688 00	35	602 00	50	860 00	46	791 20	35	602 00	70	1,204 00	50	860 00	35	602 00	25	430 00	27	464 40	30	516 00	20	344 00
Terra cotta pipe, drain	15	52 lin. ft.	30	15 60	1 00	52 00	1 00	52 00	1 00	52 00	30	15 60	50	26 00	1 00	52 00	50	26 00	1 00	52 00	3 50	182 00	50	26 00	30	15 60
Total with Item No. 12 unreinforced				$143,190 80		$146,755 83		$153,956 50		$156,161 40		$158,816 80		$164,187 00		$168,547 70		$173,716 45		$174,325 80		$175,364 60		$186,684 50		$149,062 15
Total with Item No. 12 reinforced				$150,323 30		$167,663 33		$163,354 00		$1 2,488 90		$159,129 30		$183,687 00		$176,485 20		$181,766 45		$176,815 80		$175,702 10		$190,772 00		

BALTIMORE CITY WATER DEPARTMENT GUNPOWDER SUPPLY IMPROVEMENTS.

Tabulation of Bids for Superstructure of Bridge No. 1 -Contract No. 6.

Bids Opened March 5, 1913. Approved, Ezra B. Whitman, *Water Engineer.*

Roanoke Bridge Co., Roanoke, Va.		American Bridge Co., New York, N. Y.		Nelson-Merydith Co., Chambersburg, Pa.		King Bridge Co., Cleveland, Ohio.		Lauer & Harper Co., Westport, Md.		Pennsylvania Steel Company.		York Bridge Co., York, Pa.		Riter-Conley Mfg. Co., Pittsburg, Pa.		Engineer's Estimate.	
	$40,117		$54,600		$57,680		$58,800		$61,850		$62,200		$69,900		$71,700		$54,952
150 days @ $15	2,250	200 days @ $15	3,000	250 days @ $15	3,750	200 days @ $15..	3,000	180 days @ $15.	2,700	190 days @ $15..	2,850	350 days @ $15 .	5,250	217 days @ $15.	3,255	200 days @ $15	3,000
	$42,367		$57,600		$61,430		$61,800		$64,550		$65,050		$75,150		$74,955		$57,952

Two riveted truss spans, 297′ 0″ center to center end pins. Trusses, 23′ 6″ center to center.

BALTIMORE CITY WATER DEPARTMENT—GUNPOWDER SUPPLY IMPROVEMENTS.

Tabulation of Bids for Construction of Road No. 1—Contract No. 7.

Bids Opened April 23, 1913. Approved, Ezra B. Whitman, *Water Engineer.*

Items.	Item Number.	Quantity.	Thomas Mullon, Baltimore, Md.		D. V. Ault & Co., Baltimore, Md.		The Piedmont Construction Co., Baltimore, Md.		Mason-Hilton & Co., New York, N. Y.		King-Ganey Contracting Co., New York, N. Y.		The Whiting-Turner Construction Co., Baltimore, Md.		Hassam Paving Company, Worcester, Mass.		Engineer's Estimate.	
			Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit. Price.	Total.
Clearing and grubbing	1	9 acres.	$72 00	$648 00	$350 00	$3,150 00	$100 00	$900 00	$200 00	$1,800 00	$100 00	$900 00	$200 00	$1,800 00	$125 00	$1,125 00	$100 00	$900 00
Stripping	2	1,000 sq. yds.	15	150 00	25	250 00	16	160 00	20	200 00	15	150 00	10	100 00	40	400 00	20	200 00
Earth excavation	3	13,210 cu. yds.	39	5,151 90	85	11,228 50	45	5,944 50	55	7,265 50	50	6,605 00	63	8,322 30	69	9,114 90	30	3,963 00
Loose rock excavation	4	12,060 cu. yds.	58	6,994 80	85	10,251 00	85	10,251 00	70	8,442 00	75	9,045 00	80	9,648 00	1 10	13,266 00	75	9,045 00
Solid rock excavation.	5	22,950 cu. yds.	69	15,835 50	85	19,507 50	1 10	25,245 00	1 30	29,835 00	2 00	45,900 00	1 61	36,949 50	2 00	45,900 00	1 15	26,392 50
Rubble masonry	6	460 cu. yds.	5 25	2,415 00	7 00	3,220 00	6 00	2,760 00	5 00	2,300 00	5 00	2,300 00	7 85	3,611 00	4 00	1,840 00	5 00	2,300 00
Concrete road drains	7	18	70 00	1,260 00	16 00	288 00	125 00	2,250 00	80 00	1,440 00	25 00	450 00	50 00	900 00	75 00	1,350 00	45 00	810 00
24 inch reinforced concrete pipe	8	204 lin. ft.	3 75	765 00	6 00	1,224 00	10 00	2,040 00	2 75	561 00	2 00	408 00	3 88	791 52	4 00	816 00	1 70	346 80
48 inch reinforced concrete pipe	9	58 lin. ft.	6 50	377 00	10 00	580 00	18 00	1,044 00	8 50	493 00	3 00	174 00	6 65	385 70	12 00	696 00	4 70	272 60
72-inch reinforced concrete pipe	10	132 lin. ft.	11 00	1,452 00	18 00	2,376 00	20 00	2,640 00	17 50	2,310 00	4 00	528 00	10 35	1,366 20	20 00	2,640 00	10 00	1,320 00
Concrete in end walls.	11	106 cu. yds.	11 00	1,166 00	14 00	2,484 00	12 00	1,272 00	13 50	1,431 00	8 00	848 00	10 68	1,132 08	10 00	1,060 00	10 00	1,060 00
Macadam (8 inch depth)	12	5,597 sq. yds.	1 00	5,597 00	1 10	6,156 70	1 38	7,723 86	1 40	7,835 80	70	3,917 90	1 52	8,507 44	1 25	6,996 25	1 00	5,597 00
Macadam (6-inch depth)	13	5,597 sq. yds.	90	5,037 30	90	5,037 30	1 20	6,716 40	1 10	6,156 70	55	3,078 35	1 19	6,660 43	1 00	5,597 00	85	4,757 45
Underdrain, 4-inch terra cotta pipe laid in broken stone.	14	1,000 lin. ft.	60	600 00	40	400 00	80	800 00	70	700 00	40	400 00	50	500 00	70	700 00	45	450 00
Paving	15	200 sq. yds.	1 00	200 00	90	180 00	1 50	300 00	60	120 00	1 00	200 00	1 00	200 00	1 00	200 00	50	100 00
Total				$47,649 50		$66,333 00		$70,046 76		$70,890 00		$74,904 25		$80,874 17		$91,701 15		$57,514 35
Time at $15 per day			100	1,500 00	240	3,600 00	150	2,250 00	240	3,600 00	120	1,800 00	180	2,700 00	225	3,375 00	150	2,250 00
Grand total.				$49,149 50		$69,933 00		$72,296 76		$74,490 00		$76,704 25		$83,574 17		$95,076 15		$59,764 35

BALTIMORE CITY WATER DEPARTMENT—GUNPOWDER SUPPLY IMPROVEMENTS.

Tabulation of Bids for Furnishing Sluice Gates for New Loch Raven Dam—Contract No. 8.

Bids Opened February 12, 1913. Approved, EZRA B. WHITMAN, *Water Engineer.*

Items.	Item Number.	Quantity.	Coffin Valve Co. Boston, Mass.				The Chapman Valve Mfg. Co. Indian Orchard, Mass.		Coldwell-Wilcox Company, Newburgh, N. Y.		Flynn & Emrich Company, Baltimore, Md.		"Ludlow Valve." W. W. Lindsay & Co. Philadelphia, Pa.		Engineer's Estimate.	
			Bidder's Plans.		Department Plans.		Department Plans.		Department Plans.		Department Plans.		Department Plans.		Department Plans.	
			Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.
42 x 72-inch sluice gates with appurtenances	1	4	$447 00	$1,788 00	$538 00	$2,152 00	$560 00	$2,240 00	$599 00	$2,396 00	$785 00	$3,140 00	$907 00	$3,628 00	$500 00	$2,000 00
48-inch diameter sluice gates with appurtenances	2	2	427 00	854 00	500 00	1,000 00	485 00	970 00	401 00	802 00	700 00	1,400 00	738 50	1,477 00	500 00	1,000 00
24-inch diameter sluice gates with appurtenances	3	4	151 00	604 00	164 00	656 00	146 00	584 00	219 00	876 00	375 00	1,500 00	256 00	1,024 00	150 00	600 00
Total, Items Nos. 1, 2 and 3				$3,246 00		$3,808 00		$3,794 00		$4,074 00		$6,040 00		$6,129 00		$3,600 00
Additional 3½-inch diameter gate stems with couplings	4	260 lin. ft.			$160 00	$416 00	$1 40	$364 40	$1 45	$377 00	$1 30	$338 00	$1 60	$416 00	$1 50	$390 00
Additional 2¼ inch diameter gate stems with couplings	5	172 lin. ft.			70	120 40	50	86 00	73	125 56	60	103 20	75	129 00	75	129 00
Additional guides for 3½-inch diameter stems	6	24			12 70	304 80	8 00	182 00	10 50	252 00	26 00	624 00	17 25	414 00	6 00	144 00
Additional guides for 2¼ inch diameter stems	7	8			8 00	64 00	5 00	40 00	7 50	60 00	24 50	196 00	14 00	112 00	5 00	40 00
Total, Items Nos. 4, 5, 6 and 7				$905 20		$905 20		$672 40		$814 56		$1,261 20		$1,071 00		$703 00
Grand total				$4,151 20		$4,713 20		$4,466 40		$4,888 56		$7,301 20		$7,200 00		$4,303 00

BALTIMORE CITY WATER DEPARTMENT GUNPOWDER SUPPLY IMPROVEMENTS.

Tabulation of Bids for Furnishing Two 48-Inch Gate Valves With 8-Inch By-Passes for Loch Raven Dam—Contract No. 10.

Bids Opened February 26, 1913 Approved, EZRA B. WHITMAN, *Water Engineer.*

Bidders.	Unit Price.	Total Bid.
Coffin Valve Manufacturing Co., Boston, Mass.	$810 00	$1,620 00
The Kennedy Valve Manufacturing Co., Elmira, N. Y.	899 00	1,798 00
The Pratt & Cady Co., Hartford, Conn	950 00	1,900 00
Rennselaer Valve Co., Troy, N. Y.	970 00	1,940 00
The Chapman Valve Manufacturing Co., Indian Orchard, Mass.	1,080 00	2,160 00
W. W. Lindsay & Co., Philadelphia, Pa., (Ludlow Valve)	1,297 00	2,594 00
Crane Co., Baltimore, Md.	1,398 00	2,796 00
Engineer's estimate	1,000 00	2,000 00

BALTIMORE CITY WATER DEPARTMENT GUNPOWDER SUPPLY IMPROVEMENTS.

Tabulation of Bids for Superstructure of Bridge No. 2—Contract No. 15.

Bids Opened September 10, 1914. Approved, EZRA B. WHITMAN, *Water Engineer*

McClintic-Marshall Co., Philadelphia, Pa.	Roanoke Bridge Co., Roanoke, Va.	American Bridge Co., Baltimore, Md	Nelson-Merydith Co., Chambersburg, Pa.,	York Bridge Co., York, Pa.
$86,750 00	$89,507 00	$103,500 00	$115,865 00	$118,500 00

BALTIMORE CITY WATER DEPARTMENT GUNPOWDER SUPPLY IMPROVEMENTS.

Tabulation of Bids for Construction of Masonry for Bridge No. 2—Contract No. 16.

Bids Opened June 4, 1913. Approved, Ezra B. Whitman, *Water Engineer*.

Items.	Item Number.	Quantity.	Stewart-Jones Co. and Claiborne-Johnston Co. Baltimore, Md.		The Whiting-Turner Construction Co. Baltimore, Md.		W. H. Thompson Construction Co. Baltimore, Md.		Mason, Hilton & Co. New York, N. Y.		Singer-Pentz Company, Baltimore, Md.		Williams & Straus, Baltimore, Md.		The Concrete and Foundation Co. New York, N. Y.		King-Ganey Contracting Co. New York, N. Y.		Engineer's Estimate.	
			Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.
Earth excavation	1	840 cu. yds.	$1 50	$1,260 00	$1 44	$1,209 60	$1 50	$1,260 00	$2 00	$1,680 00	$1 63	$1,369 20	$2 00	$1,680 00	$1 50	$1,260 00	$1 50	$1,260 00	$1 00	$840 00
Rock excavation..	2	215 cu. yds.	3 00	645 00	3 50	752 50	3 00	645 00	4 00	860 00	2 50	537 50	2 75	591 25	5 00	1,075 00	5 00	1,075 00	2 50	537 50
1:2½:5 concrete..	3	2,500 cu. yds.	8 90	22,250 00	9 09	22,725 00	10 50	26,250 00	10 70	26,750 00	11 20	28,000 00	10 90	27,250 00	11 50	28,750 00	16 00	40,000 00	10 00	25,000 00
Reinforcing steel.	4	18,000 pounds.	03½	630 00	03½	630 00	05½	990 00	04	720 00	03½	630 00	04½	810 00	05	900 00	06	1,080 00	03½	630 00
Total..........			....	$24,785 00	....	$25,317 10	....	$29,145 00	....	$30,010 00	....	$30,536 70	....	$30,331 25	....	$31,985 00	....	$43,415 00		$27,007 50
Time at $15 per day			110	1,650 00	90	1,350 00	75	1,125 00	80	1,200 00	75	1,125 00	90	1,350 00	90	1,350 00	100	1,500 00	150	2,250 00
Grand total			....	$26,435 00	....	$26,667 10	....	$30,270 00	....	$31,210 00	....	$31,661 70	....	$31,681 25	....	$33,335 00	......	$44,915 00	......	$29,257 50

BALTIMORE CITY WATER DEPARTMENT—GUNPOWDER SUPPLY IMPROVEMENTS.

Tabulation of Bids for Furnishing Distribution Mains—Contract No. 17.

Bids Opened December 24, 1913. Approved, Ezra B. Whitman, *Water Engineer*.

Item Number.	Items.	Quantities Required for Steel Pipe.	Steel Pipe.				Quantities Required for Concrete Pipe.	Concrete Pipe.					
			Lock-Joint Pipe Co., New York, N. Y.		Mason, Hilton & Co., New York, N. Y.			Lock-Joint Pipe Co., New York, N. Y.		Mason, Hilton & Co., New York, N. Y.		The Elkan-Tufts Con. Co., Baltimore, Md.	
			Unit Price.	Total.	Unit Price.	Total.		Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.
1	Earth excavation (trench)..........................	16,528 cu. yds.	$1 55	$25,618 40	$1 75	$28,924 00	19,288 cu. yds.	$1 55	$29,896 40	$1 75	$33,754 00	$1 25	$24,110 00
2	Rock excavation (trench)..........................	395 cu. yds.	3 00	1,185 00	3 00	1,185 00	395 cu. yds.	3 00	1,185 00	3 00	1,185 00	7 50	2,962 50
3	Earth excavation (shaft)..........................	864 cu. yds.	2 50	2,160 00	9 00	7,776 00	864 cu. yds.	2 50	2,160 00	9 00	7,776 00	2 50	2,160 00
4	Rock excavation (shaft)........	105 cu. yds.	4 00	420 00	9 00	945 00	105 cu. yds.	4 00	420 00	9 00	945 00	7 50	787 50
5	Sheeting (trench)	50 M. ft. B. M.	25 00	1,250 00	50 00	2,500 00	50 M. ft. B. M.	25 00	1,250 00	50 00	2,500 00	40 00	2,000 00
6	Sheeting (shaft).......	4,780 sq. ft.	25	1,195 00	25	1,195 00	4,780 sq. ft.	25	1,195 00	25	1,195 00	30	1,434 00
7	108-inch pipe in trench..........................	841 lin. ft.	31 00	26,071 00	25 00	21,025 00	841 lin. ft.	21 50	18,081 50	22 00	18,502 00	35 00	29,435 00
8	84-inch pipe in trench..........................	1,720 lin. ft.	26 00	44,720 00	20 00	34,400 00	1,720 lin. ft.	16 50	28,380 00	17 00	29,240 00	26 00	44,720 00
9	108-inch pipe in conduit..........................	4,123.51 lin. ft.	34 00	140,199 34	52 00	214,422 52	4,123.51 lin. ft.	22 50	92,778 98	23 50	96,902 49	38 00	156,693 38
10	84-inch pipe in conduit......	1,240.73 lin. ft.	30 00	37,221 99	41 00	50,869 93	1,240.73 lin. ft.	16 50	20,472 05	17 50	21,712 78	27 00	33,499 71
11	Steel special, Shaft No. 2..........................	.....	4,000 00	4,000 00	5,000 00	5,000 00	....	4,000 00	4,000 00	5,000 00	5,000 00	2,500 00	2,500 00
12	Steel specials, Shaft No. 1, etc..........................	...	2,700 00	2,700 00	3,500 00	3,500 00	.....	2,700 00	2,700 00	3,500 00	3,500 00	1,500 00	1,500 00
13	Steel, iron casting, valves, etc., Clifton Gatehouse..		9,500 00	9,500 00	11,500 00	11,500 00		9,500 00	9,500 00	12,000 00	12,000 00	7,000 00	7,000 00
14	Removing old sluice gates, etc., Clifton Gatehouse.	....	200 00	200 00	1,000 00	1,000 00	....	200 00	200 00	1,000 00	1,000 00	500 00	500 00
15	Class "A" concrete	5,286 cu. yds.	10 00	52,860 00	11 00	58,146 00	1,066 cu. yds.	10 00	10,660 00	13 00	13,858 00	2 00	2,132 00
16	Class "B" concrete.	210 cu. yds.	8 00	1,680 00	14 00	2,940 00	187 cu. yds.	8 00	1,496 00	14 25	2,664 75	8 00	1,496 00
17	Steel shapes and reinforced steel..........................	21,460 lbs.	04	858 40	07	1,502 20	21,251 lbs.	04	850 04	07	1,487 57	10	2,125 10
18	Placing 72-inch gate valve	1	50 00	50 00	200 00	200 00	1	50 00	50 00	200 00	200 00	300 00	300 00
19	Placing 48-inch gate valve	1	50 00	50 00	150 00	150 00	1	50 00	50 00	150 00	150 00	250 00	250 00
20	Cement grout	400 bags	1 50	600 00	2 50	1,000 00	400 bags	1 50	600 00	2 50	1,000 00	90	360 00
	Total.	.....	...	$352,539 04	....	$448,180 65			$225,924 97		$255,572 59		$315,965 19

BALTIMORE CITY WATER DEPARTMENT—GUNPOWDER SUPPLY IMPROVEMENTS.

Tabulation of Bids for Construction of Road No. 3—Contract No. 24.

Bids Opened September 17, 1913. Approved, Ezra B. Whitman, *Water Engineer.*

Items.	Item Number.	Quantity.	Thos. Mullan, Baltimore, Md.		Hassam Paving Co., Worcester, Mass.		Engineer's Estimate.	
			Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.
Clearing and grubbing	1	1 acre	$131 00	$131 00	$200 00	$200 00	$100 00	$100 00
Stripping	2	2,000 sq. yds.	12	240 00	30	600 00	20	400 00
Earth excavation	3	1,000 cu. yds.	56	560 00	75	750 00	55	550 00
Loose rock excavation	4	3,100 cu. yds.	62	1,922 00	75	2,325 00	80	2,480 00
Solid rock excavation	5	3,000 cu. yds.	1 32	3,960 00	2 00	6,000 00	1 15	3,450 00
Rubble masonry	6	30 cu. yds.	5 25	157 50	5 00	150 00	5 50	165 00
12-inch concrete road drains	7	5	75 00	375 00	75 00	375 00	70 00	350 00
18-inch x 18-inch reinforced concrete culvert	8	207 lin. ft.	3 15	652 05	2 50	517 50	2 00	414 00
24-inch x 24-inch reinforced concrete culvert	9	131 lin. ft.	4 70	615 70	3 50	458 50	3 50	458 50
36-inch x 24-inch reinforced concrete culvert	10	31 lin. ft.	6 90	213 90	5 50	170 50	5 50	170 50
48-inch x 36-inch reinforced concrete culvert	11	30 lin. ft.	13 00	390 00	7 00	210 00	7 25	217 50
48-inch x 48-inch reinforced concrete culvert	12	78 lin. ft.	14 00	1,092 00	8 00	624 00	8 00	624 00
1: 2½: 5 concrete in end walls, bridge abutments and wing walls	13	182 cu. yds.	14 00	2,548 00	12 00	2,184 00	10 00	1,820 00
1: 2: 4 reinforced concrete in beams, slab and parapets of bridge	14	44 cu. yds.	18 00	792 00	25 00	1,100 00	20 00	880 00
4-inch underdrains	15	1,000 lin. ft.	50	500 00	40	400 00	70	700 00
Stone paving	16	60 sq. yds.	1 00	60 00	2 00	120 00	1 00	60 00
8-inch water-bound macadam	17	6,888 sq. yds.	1 10	7,576 80	1 10	7,576 80	1 10	7,576 80
6-inch water-bound macadam	18	6,888 sq. yds.	1 00	6,888 00	90	6,199 20	90	6,199 20
6-inch concrete pavement	19	13,776 sq. yds.	1 26	17,357 76	1 50	20,664 00	1 25	17,220 00
Grand total, including Items Nos. 17 and 18, omitting Item No. 19 (macadam road)				$28,673 95		$29,960 50		$26,615 50
Grand total, including Item No. 19, omitting Items Nos. 17 and 18 (concrete road)				$31,566 91		$36,848 50		$30,059 50
Time for completion of work (days at $15 per day)			70	$1,050 00	Not	given		

REPORT OF ENGINEERING DIVISION

BALTIMORE, December 31, 1913.

MR. EZRA B. WHITMAN, *Water Engineer.*

DEAR SIR—I submit herewith the annual report of the operations of the Engineering Division for the year ending December 31, 1913.

During the year this Division has been engaged in its usual work of preparing plans for work done by the Construction and Mechanical Divisions, preparing plans and specifications for and supervising work done for the Department by contractors and making the usual tests, inspections, etc.

Plans were prepared for all the mains laid by the Construction Division, including mains from 4 inches to 48 inches in diameter, amounting in all to 90,812 feet, or 17.2 miles of mains.

The 48-inch Middle Service Main in Ensor street has been completed to North avenue.

All the large mains in connection with the improvements to the High Service distribution in the vicinity of Mount Royal Pumping Station have been completed, except the 48-inch discharge main in Malster avenue, between the pumping station and North avenue. Owing to the heavy demand for water on this service it was not deemed advisable to make any changes in piping during the summer months. The work was begun on November 1, 1913, and is now well under way.

The work of installing the new vertical triple expansion high duty pumping engine, boilers, etc., at Mount Royal Pumping Station has been completed by the Bethlehem Steel Company, according to their contract of August 31, 1911. The official test of the boilers was made on May 24. No. 4 boiler was selected as the test boiler, and the performance when operating under normal working pressure of 175 pounds per square inch gives the following results, as compared with the requirements of our specifications:

EVAPORATION TEST.

	Specified.	Actual.
Smokeless burning of bituminous coal per square foot of grate surface per hour	25.0	38.8
Degrees of superheat (F.)	50.0	77.0
Economic evaporation from and at 212° F. per pound of dry coal	10.5	11.09
Boiler horsepower developed	206.0	281.0
Efficiency of boiler (per cent.)	.....	81.72
Efficiency of boiler and grate (per cent.)	74.0	76.63
Percentage CO_2	.....	11.40

The performance of boiler and stoker, both from the standpoint of economy and ease of operation, was creditable. The boiler would have shown a better efficiency than the satisfactory 76.63 per cent. stated above had it been operated a little closer to its normal rated capacity. Moreover, this efficiency was obtained with a coal of lower calorific value (13,800 B. t. u.) than the value specified by the American Engineering Company of 14,500 B. t. u. as fired. The evaporation rate is 10 per cent. in excess of our specifications; the degrees superheat, 27 degrees higher than called for.

CAPACITY TEST.

	Specified.	Actual.
Degrees of superheat (F.)	50	96
Economic evaporation from and at 212° F. per pound of dry coal	...	9.273
Boiler horsepower developed	309	435
Rise in temperature of feed water through Green Economizer (degrees F.)	100	119
Efficiency of boiler (per cent.)	...	67.28
Efficiency of boiler and grate (per cent.)	...	63.65
Percentage CO_2	...	12.48

The boiler developed 60 per cent. in excess of the overload capacity required by the specifications. The Green Economizer, when operating with one boiler, gave 10 per cent. better performance than required.

On September 18 the pumping engine was given a twelve-hour duty trial to determine the capacity and economy of performance.

During the trial the pump was operated as uniformly as possible against a net discharge head of 92½ pounds per square inch for 212 feet head and at a speed of 25 r. p. m. The specifications called for a performance in duty of not less than 173,000,000 foot pounds of work computed on plunger displacement for each 1,000 pounds of steam furnished to the engine. In this connection please note the performance which is given for each successive hour, and the average duty obtained from the entire trial, which in every case is better than the above figure.

The water rate, or steam per I. H. P. per hour, you will also notice, is very economical, being 9.787 pounds, and with an evaporation rate in the boiler of 8.167 pounds of steam per pound of coal, gives the coal per I. H. P. per hour as 1.198 pounds.

While it is true that during this trial no steam was charged against the engine, except that actually involved in the test, while in our former operation with the Worthington Units, it has been customary to charge all steam used for auxiliary apparatus, it is interesting nevertheless to note the pumpage in gallons per pound of coal, with 865.29 gallons for the Bethlehem Vertical Unit, as against the common value of 350 to 375 gallons for the Worthington Units.

The efficiency of the engine as obtained from the indicated horsepower shows an efficiency performance of 96.92 per cent., while the thermal efficiency of 19.61 per cent. shows that full utilization of heat energy in the steam has been secured within practical attainments. The combined efficiency of the pump unit as based on indicated horsepower on the steam end and water horsepower on the plunger displacement and net head is 93.14 per cent., which gives as the total engine and pump load 6.86 per cent.

The duty of the pump per 100 pounds of coal on plunger displacement is 153,895,500 foot pounds, while the capacity of the pump in gallons per 24 hours is 22,868,000.

At the beginning of the year a survey was undertaken to ascertain by pitometer measurements the amount of underground leakage existing on the mains and service pipes in the streets and on plumbing fixtures inside of houses. The method of procedure is to isolate a district of about twenty city blocks, closing valves so that all water supplied to the district must necessarily pass through a single main. A pitometer and recording instrument are connected to the main, so as to accurately measure all water fed to the district. Careful readings are taken of the flow between midnight and 4 A. M. (the time when the least water is being used). A house-to-house inspection for the location of leaky fixtures, service pipes and mains is made during the day and as repairs are made the decreased flow is noted. If, after all visible waste has been eliminated, there is still a high rate of consumption in the district, each block is tested separately until the leaks or waste are located and repaired.

The district covered to date consists of all that part of the Western High Service area lying west of Pennsylvania avenue and south of North avenue, and that part of the Low Service area bounded by Madison street, Jefferson street, Central avenue and Bond street.

The house-to-house inspection for leaking fixtures has been made in all that portion of the High Service area between North avenue and Twenty-fifth street.

The equipment for this work consists of a pitometer, an instrument making use of the principle of the Pitot tube for measuring the velocity of flow through a pipe, and a recorder connected to the pitometer instrument, which records graphically on a chart the rate of flow through the pipe being tested. Aquaphones are used to detect waste in houses.

The cost of the work has been as follows:

Labor	$2,400 00
Engineering and inspection	2,100 00
Materials	700 00
Total cost	$5,200 00

The results show that a leakage of about 1,500,000 gallons per day has been stopped in the area surveyed. In the older sections of the city the waste must be considerably more.

TABULATION OF LEAKAGE.

Number of leaking faucets repaired	2,155
Number of leaking water closets repaired	2,607
Number of leaking house boilers repaired	15
Number of leaking inside pipe and fittings	40
Number of leaking curb stops and hose connections	9
Total number of leaking house fixtures	4,826
Number of leaking private pipes repaired	48
Number of leaking supply pipes (inside curb)	65
Number of leaking supply pipes (outside curb)	7
Total number of leaking pipes repaired	120
Number of leaks in mains repaired	37
Number of services turned off for failure to make repairs	139

From the figures resulting from the above repairs it seems that defective house fixtures are responsible for about 60 per cent. of the total leakage, the broken supplies and private pipes for about 20 per cent, and leaks on mains and valves and from street construction work, the remaining 20 per cent. For the lower part of town, with its older pipe, I expect that the percentage of leakage on mains will be much higher.

MATERIAL ON HAND.

Instruments:		
One Lanham electric pitometer recorder	$450 00	
Two Municipal Supply Company pitometer rods	130 00	
One "U" tube recorder	25 00	
One set of hydrometers	5 00	
		$610 00
Equipment:		
Two five foot by seven foot portable offices	$140 00	
Tools, valve keys, etc	200 00	
Office furniture, typewriter, etc	250 00	
Blank forms and stationery	50 00	
		540 00
Total		$1,150 00

The Pitometer Survey organization is also entrusted with superintending the cleaning of water mains. No attempt has been made to do the cleaning by the use of any of the patented apparatus or methods, but it has been done by a method of flushing in alternate directions, developed in this Department. I submit herewith the following table showing the amount and cost of the work:

UPPER SERVICE.

Number of miles of pipe cleaned	29.34
Cost	$235 57
Cost per mile of pipe	8 03

LOW SERVICE.

Number of miles of pipe cleaned	10.97
Cost	$106 75
Cost per mile of pipe	9 89
Total number of miles of pipe cleaned	40.13
Total cost	$342 32
Average cost per mile of pipe	8 96

During the past year the Division has revised, to a large extent, specifications covering supplies required by the Department and, in many instances, has extended these specifications to cover engineering materials formerly purchased by brand or in the open market.

We are also revising several of the departmental records and standardizing procedure in the permanent divisions. It is hoped to extend this class of work so that eventually this Division will act as a "Bureau of Economy and Efficiency," through its investigations into improved methods of construction and operation and into modern tools, apparatus and appliances for expediting the work.

Yours respectfully,

ROBERT L. CLEMMITT,
Assistant Water Engineer.

ENGINE ROOM RECORDS—1913.

MOUNT ROYAL PUMPING STATION.

	High Service.	Middle Service.	Combined Services.
Total hours worked:			
Pump No. 1208	5,612.2	447.2	....
Pump No. 1209	2,827.0	2,114.7	....
Pump No. 10	1,839.0	....	....
AVERAGES.			
Steam pressure at throttle (lbs.):			
Pump No. 1208	132.9	126.7	....
Pump No. 1209	132.3	126.3	....
Pump No. 10	168.3	....	....
Water pressure in suction main (lbs.):			
Pump No. 1208	12.9	11.2	....
Pump No. 1209	14.4	7.7	....
Pump No. 10	12.0	....	....
Water pressure in force main (lbs.):			
Pump No. 1208	105.2	51.5	....
Pump No. 1209	106.6	52.1	....
Pump No. 10	111.7	....	....
Inches vacuum:			
Pump No. 1208	26.5	23.4	....
Pump No. 1209	26.4	24.8	....
Pump No. 10	28.2	....	....
Strokes per minute:			
Pump No. 1208	16.4	17.3	....
Pump No. 1209	15.9	17.5	....
Pump No. 10	19.5	....	....
Length of stroke (ins.):			
Pump No. 1208	48.2	45.2	....
Pump No. 1209	48.1	44.4	....
Pump No. 10	60.0	....	....
Net head on plungers (ft.):			
Pump No. 1208	213.2	93.1	....
Pump No. 1209	212.9	102.5	....
Pump No. 10	230.3	....	....
SLIP.			
Per cent. of slip:			
Pump No. 1208	7.9	7.2	....
Pump No. 1209	15.4	13.7	....
Pump No. 10	6.8	....	....

ENGINE ROOM RECORDS—1913.

MOUNT ROYAL PUMPING STATION—*Continued.*

	High Service.	Middle Service.	Combined Services.
GALLONS PUMPED.			
Per piston displacement:			
Pump No. 1208	4,111,305,696	334,056,829	...
Pump No. 1209	1,934,094,002	1,586,748,937	...
Pump No. 10	1,351,658,212	...	...
Corrected for slip:			
Pump No. 1208	3,787,276,729	309,829,714	...
Pump No. 1209	1,635,587,406	1,369,553,926	...
Pump No. 10	1,259,250,149	...	...
Total for service	6,682,114,284	1,679,383,640	...
Per pound of coal:			
Pump No. 1208			
Pump No. 1209	...	...	368.6
Pump No. 10			
DUTY.			
Millions of ft. lbs. of work done:			
Pump No. 1208	7,287,833	258,553	...
Pump No. 1209	3,424,761	1,353,000	...
Pump No. 10	2,588,176	...	...
Duty in ft. lbs. per 100 lbs. of coal fired:			
Pump No. 1208	...	...	...
Pump No. 1209	...	...	65,737,000
Pump No. 10	...	...	...
COST.			
Total cost of pumping	...	...	$55,289.97
Cost of pumping 1,000,000 gallons	...	...	$6.61
FUEL.			
Total coal fired (lbs.)	...	...	22,684.667
HORSEPOWER.			
Horsepower hours:			
Pump No. 1208	3,680,700	130,580	...
Pump No. 1209	1,729,600	683,350	...
Pump No. 10	1,307,100	...	...
Total horsepower hours for service	6,717,400	813,930	7,531,330
Horsepower hours per lb. of coal	...	...	.332

ENGINE ROOM RECORDS—1913.

EASTERN PUMPING STATION.

	High Service.	Middle Service.	Combined. Services.
Total hours worked:			
Pump No. 839	6,522.1	....	....
Pump No. 1207	2,405.9	2,160.5	....
AVERAGES.			
Steam pressure at throttle (lbs.):			
Pump No. 839	121.0	....	....
Pump No. 1207	121.1	122.6	....
Water pressure in suction main (lbs.):			
Pump No. 839	26.0	....	....
Pump No. 1207	27.2	22.8	....
Water pressure in force main (lbs.):			
Pump No. 839	113.0	....	....
Pump No. 1207	113.3	62.2	....
Inches vacuum:			
Pump No. 839	26.6	....	....
Pump No. 1207	25.1	25.8	....
Strokes per minute:			
Pump No. 839	20.8	....	....
Pump No. 1207	22.8	26.0	....
Length of stroke (ins.):			
Pump No. 839	37.0	....	....
Pump No. 1207	37.0	36.2	....
Net head on plungers (ft.):			
Pump No. 839	200.9	....	....
Pump No. 1207	198.8	91.0	....
SLIP.			
Per cent. of slip:			
Pump No. 839	18.0	....	....
Pump No. 1207	12.9	9.3	....

ENGINE ROOM RECORDS—1913.

EASTERN PUMPING STATION—*Continued.*

	High Service.	Middle Service.	Combined. Services.
GALLONS PUMPED.			
Per piston displacement:			
Pump No. 839	3,084,058,336	....	....
Pump No. 1207	1,091,698,721	1,121,990,331	....
Corrected for slip:			
Pump No. 839	2,528,344,406	....	....
Pump No. 1207	955,478,867	1,017,534,652	....
Total for service	3,483,823,273	1,017,534,652	....
Per pound of coal:			
Pump No. 839	....	....	....
Pump No. 1207	....	....	293.9
DUTY.			
Millions of ft. lbs. of work done:			
Pump No. 839	5,153,000	....	....
Pump No. 1207	1,805,167	849,000	....
Duty in ft. lbs. per 100 lbs. of coal fired:			
Pump No. 839	....	....	....
Pump No. 1207	....	....	50,968,000
COST.			
Total cost of pumping	....	....	$36,380.02
Cost of pumping 1,000,000 gallons	....	....	$8.08
FUEL.			
Total coal fired (lbs.)	....	....	15,317,877
HORSEPOWER.			
Horsepower hours:			
Pump No. 839	2,602,500	....	....
Pump No. 1207	911,700	428,790	....
Total horsepower hours for service	3,514,200	428,790	3,942,990
Horsepower hours per lb. of coal	....	....	.257

ENGINE ROOM RECORDS—1913.

WESTERN PUMPING STATION.

	Arlington Standpipe.	Roland Standpipe.	Combined. Services.
Total hours worked:			
Pump No. 46	1,219.8	1,027.3	....
Pump No. 90	2,915.7	378.4	....
AVERAGES.			
Steam pressure at throttle (lbs.):			
Pump No. 46	125.0	105.0	....
Pump No. 90	125.0	105.0	....
Water pressure in suction main (lbs.):			
Pump No. 46	0.0	0.2	....
Pump No. 90	0.3	0.0	....
Water pressure in force main (lbs.):			
Pump No. 46	146.6	100.1	....
Pump No. 90	145.8	100.5	....
Inches vacuum:			
Pump No. 46	26.5	26.3	....
Pump No. 90	26.6	26.2	....
Strokes per minute:			
Pump No. 46	30.0	30.0	....
Pump No. 90	30.0	30.0	....
Length of stroke (ins.):			
Pump No. 46	24.0	24.0	....
Pump No. 90	24.0	24.0	....
Net head on plungers (ft.):			
Pump No. 46	338.6	230.7	....
Pump No. 90	336.0	232.1	....
SLIP.			
Per cent. of slip:			
Pump No. 46	5.4	5.8	....
Pump No. 90	7.0	4.8	....

ENGINE ROOM RECORDS—1913.

WESTERN PUMPING STATION—*Continued.*

	Arlington Standpipe.	Roland Standpipe.	Combined. Services.
GALLONS PUMPED.			
Per piston displacement:			
Pump No. 46	157,840,788	124,480,174	
Pump No. 90	378,299,511	58,118,006	
Corrected for slip:			
Pump No. 46	149,304,485	117,208,021	
Pump No. 90	352,018,414	55,340,526	
Total for service	501,322,899	172,548,547	
Per pound of coal:			
Pump No. 46			
Pump No. 90			178.8
DUTY.			
Millions of ft. lbs. of work done:			
Pump No. 46	444,400	238,830	
Pump No. 90	1,057,100	112,176	
Duty in ft. lbs. per 100 lbs. of coal fired:			
Pump No. 46			
Pump No. 90			49,142,000
COST.			
Total cost of pumping			$14,797.05
Cost of pumping 1,000,000 gallons			$21.96
FUEL.			
Total coal fired (lbs.)			3,769,677
HORSEPOWER.			
Horsepower hours:			
Pump No. 46	224,440	120,620	
Pump No. 90	533,900	56,654	
Total horsepower hours for service.	758,340	177,274	935,614
Horsepower hours per lb. of coal			.248

RESUME OF WORK DONE.

Months.	Fire Supplies Located.	Fire Supplies Inspected.	Special Inspections.	New Services Located.	Meter Services Located.	Plumbing Inspections.	Private Pipe Inspections.	Complaints Investigated.	Meters Read.	Meters Inspected.	Minor Repairs to Meters.	Meters Tested.
January	1	62	15	218	8	80	....	20	185	358	87	141
February	2	73	8	318	7	90	2	15	285	266	42	133
March	3	57	21	372	14	112	6	12	3,811	130	22	141
April	2	45	9	472	18	115	10	13	388	281	66	63
May	2	62	21	301	9	108	15	10	490	273	34	62
June	1	51	20	325	13	110	8	6	3,898	201	33	30
July	3	41	18	342	11	125	9	5	720	408	77	76
August	3	36	21	326	16	130	8	10	648	458	99	75
September	....	169	31	490	75	117	5	10	4,049	320	100	59
October	4	76	24	346	84	128	6	8	764	574	102	153
November	1	83	33	294	150	132	....	12	651	665	128	68
December	1	76	23	230	140	92	5	9	4,031	507	75	160
Totals	23	831	244	4,034	345	1,339	74	130	19,920	4,441	865	1,161

REPORT OF THE WATER CONSUMPTION BY THE CITY FOR THE YEAR 1913 (GALLONS).

	January.	February.	March.	April	May.	June	July.	August	September.	October.	November.	December	Totals	Grand Totals	Net Totals.
LOW SERVICE.															
By Venturi Meter No 223	355,090,000	317,670,000	360,380,000	365,420,000	399,350,000	409,950,000	432,010,000	432,450,000	408,490,000	403,290,000	380,170,000	385,200,000	4,649,470,000		
By Venturi Meter No 224	334,750,000	297,490,000	339,390,000	340,570,000	371,210,000	383,070,000	406,180,000	413,210,000	385,200,000	382,160,000	359,240,000	365,540,000	4,378,010,000		
By open valves from Middle Service	000	000	000	000	000	000	000	000	000	000	000	000			
Total Low Service Consumption	689,840,000	615,160,000	699,770,000	705,990,000	770,560,000	793,020,000	838,190,000	845,660,000	793,690,000	785,450,000	739,410,000	750,740,000			9,027,480,000
MIDDLE SERVICE															
By Venturi Meter No 220	144,490,000	126,170,000	148,310,000	940,000	99,220,000	155,280,000	93,230,000	78,810,000	101,550,000	103,870,000	91,520,000	129,190,000	1,272,580,000		
By Venturi Meter No 221	143,990,000	128,960,000	151,760,000	172,860,000	167,500,000	148,340,000	100,110,000	88,450,000	100,140,000	111,270,000	95,350,000	124,890,000	1,533,620,000		
By Venturi Meter No 222	217,420,000	194,820,000	226,980,000	280,040,000	244,470,000	209,850,000	133,930,000	131,650,000	149,000,000	156,090,000	118,020,000	182,070,000	2,244,340,000		
By 6-inch Meter No 100,900	30,301,480	37,841,320	8,108,320	1,952,280	27,436,640	52,947,000	50,116,500	11,211,000	11,183,250	44,400,000	000	000	275,497,790		
By 6-inch Meter No. 200,900.	000	000	000	000	000	000	000	000	000	000	000	000	000		
By Eastern Pumping Station	000	000	000	000	000	119,128,544	253,592,053	300,251,808	183,096,958	91,487,478	69,977,811	000	1,017,534,652		
By Mount Royal Pumping Station	000	000	000	220,021,098	71,572,151	66,403,110	88,613,031	192,056,778	224,392,694	196,219,929	417,025,237	203,079,612	1,679,383,640	8,022,956,082	
Less amount supplied Low Service by open valves	000	000	000	000	000	000	000	000	000	000	000	000	000		
Less amount registered by influent register of Venturi Meter No. 220	000	000	000	189,580,000	4,290,000	000	1,790,000	34,320,000	640,000	000	000	000	230,620,000		
Less amount registered by influent register of Venturi Meter No 221.	000	000	000	000	000	000	000	000	000	000	000	000	000		
Less amount registered by influent register of Venturi Meter No 222	000	000	000	000	000	000	000	000	000	000	000	000	000	230,620,000	
Total Middle Service consumption	536,201,480	487,791,320	535,158,320	486,233,378	605,908,791	751,948,654	717,801,584	768,109,586	768,722,902	703,337,407	791,893,048	639,229,612			7,792,336,082
EASTERN HIGH SERVICE															
By Eastern Pumping Station	267,987,206	221,580,058	271,511,768	287,372,079	269,857,515	304,117,057	359,454,216	293,908,446	272,628,782	286,424,413	281,050,416	367,931,317	3,483,823,273		
Rainfall in Guilford Reservoir	563,115	176,469	632,513	1,038,987	586,909	263,712	880,363	1,108,385	329,145	868,466	378,715	485,786	7,312,565		
Loss in Guilford Reservoir	000	1,462,500	225,000	000	4,695,000	000	1,795,000	000	3,023,750	000	000	1,240,000	12,441,250	3,503,577,088	
Less amount registered by Meter No 200,900	000	000	000	000	000	000	000	000	000	000	000	000	000		
Less gain in Guilford Reservoir	2,253,750	000	000	1,462,500	000	4,020,000	000	1,345,000	000	000	4,940,000	000	14,021,250	14,021,250	
Total Eastern High Service consumption	266,296,571	223,219,027	272,369,281	286,948,566	275,139,424	300,360,769	362,129,579	293,671,831	275,981,677	287,292,879	276,489,131	369,657,103			3,489,555,838
WESTERN HIGH SERVICE.															
By Mount Royal Pumping Station	548,313,891	490,665,354	541,430,253	516,535,242	561,131,361	739,644,554	604,003,602	559,933,140	585,207,163	615,164,231	496,497,502	423,588,001	6,682,114,284		
By Western Pumping Station	000	000	000	000	000	000	000	000	000	000	000	000	000		
Rainfall in High Service Reservoir	376,644	218,326	541,346	694,557	412,393	162,149	522,195	720,093	256,629	589,863	270,673	325,573	5,090,441		
Rainfall in Lake Ashburton.	2,062,909	1,031,455	2,943,944	3,574,277	2,062,909	966,989	2,514,171	3,925,258	1,833,697	2,764,872	1,396,762	1,547,182	26,629,425		
Loss in High Service Reservoir	000	422,500	1,272,500	000	2,102,500	000	000	3,775,000	000	000	7,162,500	550,000	15,285,000		
Loss in Lake Ashburton	750,000	4,550,000	2,950,000	7,400,000	000	8,900,000	000	13,350,000	000	2,975,000	5,900,000	3,300,000	50,075,000	6,779,189,150	
Less amount registered by Meter No. 100,900	40,301,480	37,841,320	8,108,320	1,952,280	27,436,640	52,947,000	50,116,500	11,211,000	11,183,250	44,400 000	000	000	285,497,790		
Less gain in High Service Reservoir	1,552,500	000	000	707,500	000	2,525,000	425,000	000	3,775 000	2,292,500	000	000	11,277,500		
Less gain in Lake Ashburton	000	000	000	000	7,400,000	000	11,850,000	000	12,625,000	000	000	000	31,875,000		
Less amount used by fountain, Druid Lake	000	000	000	000	000	000	000	000	000	000	000	000	000	328,650,290	
Total Western High Service consumption	519,649,464	459,046,315	541,029,723	525,544,296	530,872,523	694,201,692	544,648,468	570,492,491	559,714,239	574,801,456	511,227,437	429,310,756			6,450,538,860
WESTERN UPPER SERVICE															
By Western Pumping Station	39,644,398	32,431,504	37,539,738	38,071,080	42,778,672	50,511,277	50,431,678	42,054,157	44,553,760	42,687,947	41,134,541	39,484,147			501,322,899
EASTERN UPPER SERVICE															
By Western Pumping Station	13,152,306	11,703,066	13,334,508	13,376,782	14,111,831	17,443,137	16,004,001	14,280,935	14,353,296	15,582,195	14,101,986	15,104,502			172,548,545
Total consumption by city.	2,064,784,219	1,829,351,232	2,099,201,570	2,056,164,102	2,239,371,241	2,607,485,529	2,529,205,310	2,534,269,000	2,457,015,874	2,409,151,884	2,374,256,143	2,243,526,120			27,433,782,224
Average consumption per day	66,605,943	65,333,973	67,716,180	68,538,803	72,237,782	86,916,184	81,587,268	81,750,613	81,900,529	77,714,577	79,141,871	72,371,810			75,160,911
Average consumption per capita per day.	116	114	118	119	126	151	142	142	142	135	138	126			131

[CONTINUED.]

[CONCLUDED]

FLOW CONSUMPTION AND WASTE, GUNPOWDER SUPPLY 1913 (GALLONS)

	January	February	March.	April.	May.	June.	July.	August.	September.	October.	November.	December	Totals	Grand Totals	Net Totals
Consumed by the city	1,506,141,097	1,327,405,412	1,512,712,000	1,729,918,419	1,673,121,027	2,022,313,265	2,143,852,902	2,191,810,172	2,059,015,597	1,974,746,041	2,003,960,966	1,745,338,930	21,890,335,849		
Waste from drain gates at Lake Clifton	000	000	000	000	000	000	000	000	000	000	000	121,100,000	121,100,000		
Waste over waste weirs at Lake Clifton	12,772,575	1,553,625	777,375	000	000	128,250	000	000	000	000	3,057,750	4,113,000	22,102,575		
Waste from drain gates at Lake Montebello	000	000	000	000	000	000	000	000	000	000	000	000	000		
Waste over waste weirs at Lake Montebello	82,972,800	116,323,200	40,492,800	000	000	1,641,600	000	000	000	000	65,232,000	40,896,000	347,558,400		
Waste from drain gates at Loch Raven Dam	4,393,206,500	2,353,322,000	10,233,705,500	13,694,465,500	8,901,174,500	5,696,431,000	3,313,523,000	2,636,303,500	1,028,334,000	3,631,857,000	2,397,116,000	3,462,120,000	61,711,558,500		
Clear water over Loch Raven Dam	1,473,399,000	1,870,411,200	461,981,600	87,261,200	371,473,200	....	000	000	000	000	000	8,736,000	4,273,262,200	93,683,131,724	
Muddy water over Loch Raven Dam	147,904,200	000	3,095,935,000	889,000,000	173,497,000	234,600,000	000	000	000	119,928,000	000	000	4,660,864,200		
Gain in Lake Clifton	6,950,000	5,900,000	000	27,550,000	14,225,000	33,725,000	000	39,925,000	11,375,000	45,500,000	15,750,000	000	200,900,000		
Gain in Lake Montebello	28,500,000	7,900,000	000	51,250,000	38,175,000	63,825,000	000	78,100,000	29,450,000	92,650,000	35,300,000	000	425,150,000		
Rainfall in Lake Clifton	2,444,950	1,468,698	2,963,314	4,449,291	2,315,359	1,105,843	2,427,671	8,341,211	1,252,713	7,720,235	1,779,716	2,289,411	38,558,412		
Rainfall in Lake Montebello	4,598,575	2,853,130	5,706,261	8,895,054	4,867,105	2,215,372	6,528,634	4,276,503	2,131,456	3,481,678	3,272,708	4,162,214	52,988,690		
Loss in Lake Clifton	000	000	86,400,000	000	000	000	73,650,000	000	000	000	000	56,700,000	216,750,000		
Loss in Lake Montebello	000	000	174,550,000	000	000	000	158,450,000	000	000	000	000	115,000,000	448,000,000		
Spring water entering tunnel	93,000,000	84,000,000	93,000,000	90,000,000	93,000,000	90,000,000	93,000,000	93,000,000	90,000,000	93,000,000	90,000,000	93,000,000	1,095,000,000	1,851,297,132	
Total flow of stream per month	7,551,802,647	5,594,493,609	14,982,984,721	16,376,100,774	11,071,483,263	7,959,342,900	5,123,319,597	4,840,520,958	3,034,790,428	5,760,479,128	4,425,364,292	5,111,152,285	...		91,831,834,592
Average flow of stream per day	243,606,537	199,803,343	483,322,088	545,870,026	375,144,621	265,311,430	165,268,374	156,145,837	101,159,681	185,821,907	147,512,143	164,875,880			251,594,067
Total waste per month	6,110,255,075	4,341,610,025	13,832,892,275	14,670,726,700	9,446,144,700	5,932,800,850	3,313,523,000	2,636,303,500	1,028,334,000	3,751,785,000	2,465,405,750	3,636,965,000			71,166,745,875
Average waste per day	197,105,002	155,057,501	446,222,331	489,024,223	304,714,345	197,760,028	106,887,839	85,042,048	34,277,800	121,025,323	82,180,192	117,321,452			194,977,386
Average amount consumed by city per day	48,585,197	47,407,336	48,797,162	57,663,947	53,971,646	67,410,442	69,156,545	70,703,554	68,633,853	63,701,485	66,798,699	56,301,256			59,973,717

FLOW, CONSUMPTION AND WASTE, JONES FALLS SUPPLY, 1913 (GALLONS).

	January	February.	March.	April.	May.	June.	July.	August.	September.	October	November	December	Totals.	Grand Totals	Net Totals.
Consumed by city	558,696,704	494,084,570	577,924,246	315,707,862	563,790,503	581,424,414	391,915,679	320,925,092	408,957,056	429,500,142	360,126,527	490,738,649	5,493,791,444		
Waste from Druid Lake	000	000	000	000	000	000	000	000	000	000	000	000	000		
Waste from Harpers waste weir	000	000	000	000	000	000	000	000	000	000	000	000	000		
Waste from drain gates at Lake Roland	000	000	95,466,000	478,208,500	000	000	000	000	000	000	000	000	573,674,500		
Clear water over Lake Roland Dam	689,750,000	322,000,000	410,800,000	380,250,000	516,700,000	46,900,000	000	18,000,000	198,000,000	169,750,000	448,500,000	171,500,000	3,372,150,000		
Muddy water over Lake Roland Dam	000	000	412,500,000	572,000,000	234,250,000	000	000	000	000	000	000	000	1,218,750,000		
Gain in Druid Lake	000	3,450,000	000	18,175,000	000	101,600,000	28,700,000	000	21,925,000	000	109,900,000	000	283,750,000	....	
Gain in Hampden Reservoir	000	250,000	000	16,305,000	2,495,000	000	250,000	000	10,470,000	000	23,445,000	000	53,215,000	10,995,330,944	
Rainfall in Druid Lake	4,526,850	2,564,700	6,349,950	8,343,000	4,990,350	2,008,500	5,793,750	8,806,500	2,981,850	7,045,200	3,182,700	3,847,050	60,440,400		
Rainfall in Hampden Reservoir	644,101	383,858	949,886	1,188,442	702,656	266,749	960,730	1,212,298	453,256	1,017,116	474,943	563,850	8,817,885		
Loss in Druid Lake	8,475,000	000	61,775,000	000	76,575,000	000	000	32,100,000	000	89,450,000	000	18,800,000	287,175,000		
Loss in Hampden Reservoir	000	000	18,305,000	000	000	495,000	000	11,510,000	000	22,450,000	000	000	52,760,000		
Water from Gunpowder by fountain in Druid Lake	000	000	000	000	000	000	000	000	000	000	000	000	000	409,193,285	
Total flow of stream per month	1,234,800,753	816,836,012	1,409,310,410	1,771,114,920	1,234,967,497	727,154,165	414,111,199	285,296,294	635,917,950	479,287,826	938,313,884	639,027,740			10,580,137,659
Average flow of stream per day	39,832,282	29,172,715	45,461,625	59,037,164	39,837,661	24,238,472	13,358,426	9,203,106	21,197,265	15,460,897	31,277,129	20,613,798			29,003,097
Total waste per month	689,750,000	322,000,000	918,766,000	1,430,458,500	750,950,000	46,900,000	000	18,000,000	198,000,000	169,750,000	448,500,000	171,500,000			430,381,208
Average waste per day	22,250,000	11,500,000	29,637,613	47,681,950	24,224,194	1,563,333	000	580,645	6,600,000	5,475,806	14,950,000	5,532,258			11,149,519
Average amount consumed by city per day	18,022,474	17,645,878	18,642,718	10,523,595	18,186,790	19,380,814	12,642,441	10,352,422	13,631,902	13,854,843	12,004,218	15,830,279			15,051,483
Total gravity supply	1,195,740,000	1,065,110,000	1,226,820,000	970,250,000	1,277,460,000	1,306,490,000	1,163,670,000	1,110,250,000	1,143,740,000	1,156,680,000	1,044,300,000	1,186,890,000			13,847,400,000
Total pumpage	869,097,801	756,379,982	863,816,267	1,075,376,281	959,451,530	1,297,247,679	1,372,098,581	1,402,485,264	1,324,232,653	1,247,566,183	1,319,787,493	1,049,187,579			13,538,707,293
Average consumption per diem															
Low Service	22,252,903	21,970,000	22,573,226	23,533,000	24,856,774	26,434,000	27,038,387	27,279,355	26,456,333	25,337,097	24,647,000	24,217,419			24,732,849
Middle Service	17,296,822	17,421,119	17,263,172	16,207,779	19,545,445	25,064,955	23,154,890	24,777,729	25,624,097	22,688,303	26,396,435	20,620,310			21,348,702
Eastern High Service	8,590,212	7,972,108	8,786,106	9,564,952	8,875,465	10,012,026	11,681,599	9,473,285	9,199,389	9,267,512	9,216,304	11,924,423			9,560,426
Western High Service	16,762,886	16,394,511	17,452,572	17,518,143	17,124,920	23,140,056	17,569,305	18,402,983	18,657,141	18,541,982	17,040,915	13,848,734			17,672,709
Eastern Upper Service	424,268	417,967	430,145	445,893	445,893	581,438	516,258	460,675	478,443	502,652	470,066	487,242			472,738
Western Upper Service	1,278,852	1,158,268	1,210,959	1,269,036	1,379,957	1,683,709	1,626,828	1,356,586	1,485,125	1,377,031	1,371,151	1,273,682			1,373,487

Total meter consumption for 1913.. . ... 6,759,014,445 gallons

Average meter consumption per day for 1913 . .... . .6,159,014,445 gallons.

REPORT OF CONSTRUCTION DIVISION

BALTIMORE, December 31, 1913.

MR. EZRA B. WHITMAN, *Water Engineer.*

DEAR SIR—I am enclosing you herewith my report of work done by the Construction Division for the year 1913.

This Division has been engaged during the year in the construction and repairing of all fixtures, mains and piping owned or controlled by the Water Board, consisting of the laying of all extensions of mains and the connections thereto; the installation of services, meters, hydrants, blows and fountains; the maintenance of and repairs to mains, services, hydrants and fountains.

The Division has during the year done a great deal of work in the way of laying mains in advance of improved paving, which has been carried on by the Paving Commission, the Commissioners for Opening Streets and the State Roads Commission; one of the most expensive of these jobs being the lowering of the 12-inch and 30-inch mains on Reisterstown road, which necessitated a cut into a rock bed at some points nine feet deep, to conform to the new grade established by the State Roads Commission; the total cost of the work done during the year in advance of improved paving being $154,183.16.

We have also done considerable work for the Sewerage Commission, consisting of the moving of our mains out of the way of sewers and the moving of a number of our mains around their manholes; also, we have made for them 575 one-inch taps on our mains for the purpose of a supply to their manholes.

Quite a large part of our force have been kept most of the year at Mount Royal Pumping Station, laying mains and making 30-inch, 36-inch and 48-inch connections, necessitated by the installation of the new pump at Mount Royal Pumping Station.

During August of this year we installed a 36-inch valve at Eutaw Place and North avenue, which necessitated the shutting down of the 36-inch force main.

We have installed during the year 3,256 flat-rate services, at a loss of $2,896.52; a portion of this loss was due to the system of manifold services installed in advance of improved paving opposite unimproved lots and also where rows of houses were built on streets paved with improved paving, we having made only two cuts in the paving and running the supply pipe inside and parallel with the curb.

Owing to the great amount of new and repair work that we have been called upon to do this year, there has been quite a scarcity of of labor; this condition probably being due to the great amount of work being done by other departments and contractors in the city during the year.

The amount of work done by this Division which was billed against other departments, contractors and consumers, was $50,558.99, which is about a 40 per cent. increase over the previous year.

I am pleased to report that the employees of this Division, whose number comprise a majority of those in the Department, have performed their duties in a manner which has been thoroughly satisfactory.

I submit herewith details of the work of this Division, with tables showing cost of labor and material under the headings of the various charge accounts of the Division.

Respectfully submitted,

GEORGE R. TRUELOVE,
Superintendent Construction Division.

EXTENSION OF MAINS AND CONNECTIONS.

Location.	Size.
Alley east of Charles street, north from Biddle street	6-inch
Alley east of Harford avenue, north from Lanvale street	6-inch
Alley south from Frederick avenue to Stafford street, west to cemetery wall	4-inch
Abell street, between Thirtieth street and Thirty-first street	6-inch
Ashland avenue, between Homewood avenue and Harford avenue	6-inch
Alley north of Brooks lane, between Eutaw street and Linden avenue.	6-inch
Avalon avenue, from Evergreen Terrace to Parkwood avenue	4-inch
Alto avenue, from Lyndhurst to Montgomery road	6-inch
First alley west from Harford avenue, from Alameda to Hugo avenue	4-inch
Albemarle street, from Stiles street to Trinity street	6-inch
Aliceanna street, between East Falls avenue and Broadway	6-inch
Atkinson avenue, between Twenty-seventh and Twenty-eighth streets	6-inch
Bethel street, from Pratt street to Lancaster street	6-inch
Bethel street, from Lancaster street to Shakespeare street	6-inch
Baltimore street, from Carrollton avenue to Stockton street	6-inch
Bloom street, from Eutaw Place to Pennsylvania avenue	6-inch
Baltimore street and Patterson Park avenue	6-inch and 10-inch
Brighton street, from Poplar Grove to Longwood street	6-inch
Baker street, from Tenth street to Eleventh street	6-inch
Brighton street and Eleventh street	6-inch
Brunswick street and Wilkens avenue and Brunswick street south of bridge	10-inch
Baltimore street and Fallsway	10-inch
Baltimore street, from Falls avenue to Albemarle street to Plowman street	10-inch
Baltimore street, between Wolfe street and Washington street	6-inch
Biddle street, from East avenue to Loneys lane and south on Loneys lane	6-inch
Bond street, from Baltimore street to Eastern avenue	6-inch
Barclay street, from Thirtieth street to Thirty-first street	6-inch
Carter street, from Lafayette avenue to North avenue	3-inch
Collington avenue, between Fayette street and Orleans street	6-inch
Chester street, from North avenue to Clifton avenue	6-inch
Chelsea avenue, from Mondawmin avenue to Piedmont avenue	6-inch
Charles street, from Lee street to Hill street	6-inch
Cromwell street, between Charles street and Hanover street	6-inch
Charles street, from Thirty-seventh street to Stratford road	6-inch
Clifton avenue, from Fulton avenue to Smallwood street	6-inch
Collington avenue, north from Baltimore street	6-inch
Centre street, between St. Paul street and Charles street	6-inch
Chelsea Terrace, from Piedmont to Duvall avenues	6-inch
Cottage avenue, from Forty-first street to Shirley avenue	6-inch
Chancery Square, from Chancery street to St. Martins road	6-inch
Clement street, east from Andre street	6-inch
Division street, from Mosher street to Dolphin street	6-inch
Decker street, from Foster avenue to Fait avenue	6-inch
Dallas street, from Baltimore street to Oliver street	4-inch and 6-inch
Decker street, between McElderry and Monument streets	3-inch

EXTENSION OF MAINS AND CONNECTIONS.

Location.	Size.
Devon street and Bretton street, from York road to Chancery street	6-inch
Darley avenue, east from Germania avenue	6-inch
Ensor street, from Hoffman street to Eager street	36-inch and 48-inch
Ensor street, from Hoffman street to North avenue	48-inch
Eager Place, from Patterson Park avenue to Bradford street	6-inch
Exeter street, from Pratt street to Fawn street	6-inch
Edmondson avenue, from Nineteenth street to city line	6-inch
Edmondson avenue and Eleventh street	16-inch
Edgemont avenue, from Evergreen Terrace to Parkwood avenue	6-inch
East side York road, north from Arlington avenue	4-inch
Eastern avenue, from Central avenue to East avenue	6-inch
Eutaw Court, west from Eutaw street	6-inch
Eden street, from Lancaster street to Fairmount avenue	6-inch
Eden street, between Fayette street and Madison street	6-inch
Ellamont avenue, between North avenue and Baker street	6-inch
Eugene street, east from Braddish avenue	6-inch
Eleventh street, west from Clinton street	6-inch
Fallsway and Lexington street	10-inch
Fallsway, between Gay street and Hillen street	6-inch
Fort avenue, from Laurence street to Hull street	6-inch
Fort avenue, from Hull street to Fort McHenry	6-inch
Fayette street, between Wolfe street and Luzerne street	6-inch
Fayette street, from Eutaw street to Greene street	6-inch
Frederick avenue, from Vanbibber lane to Dorseys lane	12-inch
Forrest avenue, from Hilton street to Waldheim street	6-inch
Fayette street, from Harrison street to High street	10-inch
Fairmount avenue, from Central avenue to Broadway	6-inch
Fayette street, between Bond street and Broadway	6-inch
Fairmount avenue and Patterson Park avenue	10-inch
Guilford avenue, from Thirtieth street to Thirty-first street	6-inch
Grove street, between Madison street and Ashland avenue	6-inch
Glyndon avenue, west from Carey street	6-inch
Gold street, from McCulloh street to Calhoun street	6-inch
Greenway street, from Thirty-ninth street to Highfield street	6-inch
Greenway street, from St. Paul Boulevard to Thirty-ninth street	6-inch and 10-inch
Gough street, from Central avenue to Broadway	6-inch
Guilford avenue, between Twenty-seventh and Thirty-first streets	6-inch
Grantley street, from Springdale to Forest Park avenues	6-inch and 10-inch
Harford avenue and Tivola avenue	6-inch
Harford avenue and Alameda avenue	6-inch
Hilldale avenue, west from Park Heights avenue	6-inch
Harlem avenue, from Bentalou street to Wheeler avenue	6-inch
Hendersons Wharf (foot of Wolfe street)	10-inch
Harford avenue, Fenwick avenue, Hugo avenue and Hillen road	6-inch
Henrietta street and Hanover street	30-inch
Harford avenue, from Parkview to Overland avenue	3-inch
Heath street, from Charles street to Patapsco street	6-inch
Harlem avenue, from Wheeler avenue to Warwick avenue	6-inch

EXTENSION OF MAINS AND CONNECTIONS.

Location.	Size.
Hamburg street, from Light street to Covington street	6-inch
Hickory avenue between Thirty-sixth and Thirty-eighth streets	6-inch
Hilton street, from Walbrook avenue to Clifton avenue	6-inch
Howard street, between Richmond and Cathedral streets	6-inch
Harlem avenue, east from Claymont avenue	6-inch
Jones Falls and Pratt street	16-inch
John street, from North avenue to Lanvale street	6-inch
Kenwood avenue, from Madison street to Ashland avenue	6-inch
Low street, between East street and High street	6-inch
Lloyd street and Granby street	6-inch
Lanvale street, from Madison avenue to McCulloh street	6-inch
Laurens street, from Jordan alley to Eutaw Place	6-inch
Laurens street, from Morris alley to Eutaw Place	6-inch
Lloyd street, from Baltimore street to Lombard street	6-inch
Lennox street, from Callow avenue to Park avenue	6-inch and 10-inch
Lafayette avenue, from Charles street to Calvert street	6-inch
Lyndhurst avenue, from Bateman avenue to Alto avenue	6-inch
Lake Montebello (Filtration Plant)	6-inch
Lafayette avenue and alley west of Fulton avenue	6-inch
Lemmon Court, east from Addison alley	3-inch
Lombard street, from Exeter street to Washington street	6-inch
Mosher street, from Eutaw to Brevard streets	6-inch
Mosher street, from Malster avenue to Park avenue	36-inch
Malakoff street, from Washington street to Chester street	6-inch
Maryland avenue, between Lafayette avenue and Falls road	6-inch
McElderry street, from Aisquith street to Broadway	6-inch
McMechen street, from Park avenue to Bolton street	30-inch
Montford avenue, from Preston street to Hoffman street	6-inch
McMechen street, between Druid Hill avenue and Division street	20-inch
McKim street, Homewood avenue, between Madison and Eager streets	6-inch
Madeira street, from Jefferson street to Monument street	6-inch
Martin street, north from Fort avenue	6-inch
McComas street, between Johnson and Gould streets	6-inch
Madison street, between Buren street and Guilford avenue	20-inch
Milton avenue, from Mura street to Preston street	4-inch
Mosher street, west from Poplar Grove street	6-inch
Monument street, from Holliday street to Buren street	12-inch
Orleans street and Patterson Park avenue	6-inch and 20-inch
Ostend street, from Sharp street to Howard street	6-inch
Oak street, from University Parkway to Mallory lane	6-inch
Penrose avenue, from Pulaski street to Smallwood street	6-inch
Poplar Grove street, between Franklin street and Edmondson avenue	6-inch
Patterson Park avenue, between Chase street and Biddle street	6-inch
Park avenue and Dolphin street	20-inch and 30-inch
Pratt street, from Central avenue to Lloyd street	6-inch
Presstman street, from Eighth to Ninth streets	6-inch
Pratt street, between Central avenue and Patterson Park avenue	6-inch

EXTENSION OF MAINS AND CONNECTIONS.

Location.	Size.
Presbury street, from Smallwood to Bentalou streets	6-inch
Pleasant Place, north from Thirty-eighth street	6-inch
Presbury street, from Ruxton to Moreland avenues	6-inch
Park Heights avenue, between Ullman and Violet avenue	6-inch
Plum alley, between Montgomery and Henrietta streets	3-inch
Park avenue, from McMechen street to Wilson street	30-inch
Ruxton avenue, from Baker street to Presbury street	6-inch
Race street, from West street to Cross street	10-inch
Rosedale avenue, from Clifton avenue to Windsor avenue	6-inch
Rosedale avenue, from North avenue to Baker street	6-inch
Reservoir street, between Brookfield avenue and Mt. Royal Terrace	6-inch
South side of Franklin street, between Calhoun and Carey streets	3-inch
Smallwood street, from Presbury street to Westwood avenue	6-inch
South side Saratoga street, between Pulaski and Smallwood streets,	3 and 6-inch
St. Paul street, from Thirty-ninth street to Stratford road,	6-inch and 10-inch
Somerset street, from Ashland avenue to Eager street	3-inch
Spring street, from Fleet street to Aliceanna street	6-inch
St. Martins road, between Frenchurch and Greenway avenue	6-inch
Twenty-foot alley, north of forty-foot avenue, north of Atlantic avenue, west of Harford road	3-inch
Tivoly avenue, west from Harford road	6-inch
Twenty-eighth street, between Calvert street and Guilford avenue	6-inch
Thirty-first street and alley west of Barclay street	6-inch
Thirtieth street, from Calvert street to Guilford avenue	6-inch
Thomas avenue, from Windsor Mill road to Presbury street	6-inch
Thirty-third street, from Abell avenue to Barclay street	6-inch
Trinity street, from Albemarle street to Trine alley	6-inch
Union Abattoir	6-inch
University Circle, from Oak street to Stoney Run lane	6-inch
Underwood road, from Wendover to York road	6-inch
Watson street, from Central avenue to High street	6-inch
William street, from Ostend street to Gittings street	6-inch
Waesche street, from Myrtle avenue to Fremont street	6-inch
Walrad avenue, east from Collins avenue	6-inch
Wilson street, from Eutaw street to Morris alley	6-inch
Wicomico street, from Ostend street to Bayard street	8-inch
Whitelock street, from North avenue to McCulloh street	12-inch
West side of Paca street, from Lexington to Clay streets	6-inch
Westwood avenue, from Poplar Grove to Hilton streets	6-inch
Wyman avenue, east from Huntingdon avenue	6-inch
Westwood avenue, from Smallwood street to Warwick avenue	6-inch
Western Pumping Station (Druid Hill avenue)	20-inch
Wendover, from Greenway to Juniper road	6-inch
Warwick avenue, from Windsor Mill road to Baker street	6-inch

NEW FIRE HYDRANTS—NEW SITES.

Location.	Size.
East side Chelsea Terrace and alley north of Piedmont avenue...	6-inch
Northwest corner Chelsea Terrace and Bateman avenue..........	6-inch
East side Chelsea Terrace and alley north of Bateman avenue......	6-inch
Northwest corner Albemarle street and Plowman street..........	6-inch
Northeast corner Aliceanna street and Eden street..............	6-inch
Northeast corner Howard street and Richmond street............	6-inch
Northeast corner Howard street and Park avenue................	6-inch
Northwest corner Cottage avenue and Forty-first street...........	6-inch
Northwest corner Aliceanna street and Eden street..............	6-inch
Northwest corner Forest Park avenue and Grantley street.......	6-inch
Northwest corner Loneys lane and Union Railroad, at Eager street	6-inch
Southeast corner Atkinson avenue and Twenty-eighth street.......	6-inch
Northwest corner Westwood avenue and Smallwood street........	6-inch
Southwest corner Eden street and Monument street..............	6-inch
Northwest corner Caroline street and Dallas street..............	6-inch
Northeast corner Eden street and Gough street..................	6-inch
Northeast corner University Square and University Circle........	6-inch
Southwest corner Reisterstown road and Mohawk avenue.........	6-inch
Southwest corner Reisterstown road and Chowan avenue.........	6-inch
Southwest corner Reisterstown road and Anoka avenue...........	6-inch
Southwest corner Reisterstown road and Ocala avenue...........	6-inch
North side Earl avenue, west of Reisterstown road..............	6-inch
Northwest corner Presbury street and Ruxton avenue............	6-inch
West side Caroline street, north of Bank street................	6-inch
Northeast corner Baker street and Thomas avenue...............	6-inch
East side Caroline street, between Lancaster and Dock streets....	6-inch
Southwest corner Lombard street and Spring street.............	6-inch
Northwest corner Presbury street and Thomas avenue...........	6-inch
Northeast corner Braddish avenue and Eugene street.............	6-inch
Northeast corner Darley avenue and Germania avenue...........	6-inch
Northwest corner Wills street and Philpot street................	6-inch
Southeast corner Trinity street and Albemarle street...........	6-inch
Northwest corner Lombard street and Lloyd street..............	6-inch
Northwest corner Fort avenue and Ludlow street................	6-inch
Northeast corner Fawn street and Exeter street..................	6-inch
Southeast corner Exeter street and Stiles street.................	6-inch
Northwest corner Division street and McMechen street...........	6-inch
Southwest corner Harford avenue and Hugo avenue.............	6-inch
Southwest corner Druid Hill avenue and Gold street.............	6-inch
Southeast corner Park avenue and Reservoir street..............	6-inch
Northwest corner Pleasant street and Courtland street...........	6-inch
Southwest corner Bolton street and Reservoir street.............	6-inch
Southeast corner McKim street and Willow street................	6-inch
Southwest corner Franklin street and St. Paul street.............	6-inch
Northwest corner Pleasant street and St. Paul street.............	6-inch
Northeast corner Franklin street and Monroe street..............	6-inch
Southwest corner Dark lane and St. Paul street..................	6-inch
Northeast corner Brighton street and Eleventh street............	6-inch
Northwest corner St. Paul street and Stratford road............	6-inch

NEW FIRE HYDRANTS—NEW SITES.

Location.	Size.
Northeast corner Caroline street and Mulliken street............	6-inch
Southwest corner St. Paul street and Highfield street.............	6-inch
Southeast corner Bolton street and Lennox street................	6-inch
Southwest corner Clifton avenue and Payson street...............	6-inch
Southeast corner Clifton avenue and McKeen street..............	6-inch
Southeast corner Clifton avenue and Monroe street	6-inch
Northwest corner Forrest avenue and Eleventh street.............	6-inch
Northwest corner Evergreen Terrace and Edgemont avenue.......	6-inch
Southwest corner Central avenue and Pratt street...............	6-inch
Southeast corner Pratt street and Lloyd street..................	6-inch
Northwest corner Fairmount avenue and Catherine street.........	6-inch
Northwest corner Baltimore and Catherine streets................	6-inch
Northeast corner Baltimore and Shipley streets	6-inch
Northwest corner William and Ostend streets....................	6-inch
Northeast corner Watson and Lloyd streets......................	6-inch
Southwest corner Madison avenue and Lanvale street............	6-inch
Southwest corner Baltimore street and Linwood avenue...........	6-inch
Northeast corner Colvin street and Low street..................	6-inch
East side Maryland avenue, opposite Falls road..................	6-inch
Opposite 747 West Lexington street.............................	6-inch
Opposite 763 Waesche street	6-inch
Northeast corner Eutaw Place and Laurens street................	6-inch
Southwest corner Greene street and Mulberry street.............	6-inch
Opposite 641 West Franklin street	6-inch
Opposite 635 West Mulberry street	6-inch
Northeast corner Saratoga street and Smallwood street..........	6-inch
Southwest corner Eutaw Place and Laurens street................	6-inch
West side of Mount street, north of Riggs avenue...............	6-inch
Southwest corner Exeter street and Necessity alley..............	6-inch
Northeast corner Baltimore street and Rogers avenue............	6-inch
Northeast corner Forrest street and Comet street................	6-inch
Southeast corner Pennsylvania avenue and Greene street.........	6-inch
Southeast corner Fayette street and Painters Court..............	6-inch
Northwest corner Bloom street and Morris alley..................	6-inch
East side of Exeter street, south of Front street................	6-inch
Southeast corner McElderry street and Central avenue............	6-inch
Northwest corner McMechen street and Park avenue...............	6-inch
Northwest corner Fort avenue and Armour street.................	6-inch
Northwest corner Harlem avenue and Wheeler avenue.............	6-inch
Southwest corner Harlem avenue and Bentalou street............	6-inch
East side Chestnut street, between Low street and Lexington street	6-inch
Southeast corner Patterson Park avenue and Eager Place.........	6-inch
Northeast corner Fayette street and Madeira street..............	6-inch
Southeast corner Trinity street and High street.................	6-inch
Northeast corner Lyndhurst avenue and Alto avenue.............	6-inch
Southeast corner Alto avenue and Montgomery road.............	6-inch

NEW FIRE HYDRANTS—NEW SITES.

Location.	Size.
Northeast corner Lafayette avenue and St. Paul street	6-inch
Northeast corner Fairmount avenue and Garrison lane	6-inch
Northeast corner Whitelock street and Francis street	6-inch
Northeast corner Whitelock street and Woodbrook avenue	6-inch
Northeast corner Greenway avenue and Wendover street	6-inch
Northeast corner Greenway avenue and St. Martins road	6-inch
Northeast corner Greenway avenue and Chancery street	6-inch
Southwest corner Frederick avenue and Eighth street	6-inch
Southwest corner Frederick avenue and Hurleys lane	6-inch
South side Frederick avenue, east of Longwood street	6-inch
South side Frederick avenue, east of Caton avenue	6-inch
Southeast corner Albemarle street and Stiles street	6-inch
Northwest corner High street and Stiles street	6-inch
Northeast corner East Falls avenue and Aliceanna street	6-inch
Southeast corner Fayette street and Garrison lane	6-inch
Northeast corner Bolton street and North avenue	6-inch
Washington road, opposite Sexton street	6-inch
Washington road, opposite Annapolis road	6-inch
Northwest corner Wicomico street and Carey street	6-inch
Southwest corner Madison street and Howard street	6-inch
Southeast corner Eastern avenue and Belnord avenue	6-inch
Southeast corner Eastern avenue and Streeper street	6-inch
Southwest corner Eastern avenue and Curley street	6-inch
Southwest corner Eastern avenue and Decker street	6-inch
Southwest corner Eastern avenue and Robinson street	6-inch
Northeast corner Hamburg street and Compton street	6-inch
Northeast corner Hamburg street and Henry street	6-inch
Northwest corner Hamburg street and Battery avenue	6-inch
Northeast corner Chelsea Terrace and Piedmont avenue	6-inch
Northeast corner Warwick avenue and Baker street	6-inch
Northeast corner Bond street and Lombard street	6-inch
Southwest corner Broadway and Lombard street	6-inch
North side Monument street, between Fallsway and Buren street	6-inch
Northwest corner St. Martins road and Fenchurch street	6-inch
Northeast corner Wendover road and Greenway avenue	6-inch
Northwest corner Chancery Square and Chancery street	6-inch
Southwest corner Suffolk street and Bretton street	6-inch
Northeast corner St. Paul Boulevard and Greenway avenue	6-inch
Northwest corner Ellamont avenue and Grayson street	6-inch
Southeast corner Lombard street and Ann street	6-inch
North side Eastern avenue, opposite Lakewood avenue	6-inch
Northwest corner Pratt street and Spring street	6-inch
Northeast corner Pratt street and Bethel street	6-inch
Total number of new fire hydrants (new sites) erected	138

NEW FIRE HYDRANTS—OLD SITES.

Location.	Size.
Southeast corner Granby and Lloyd streets	6-inch
Southeast corner Bond and Lancaster streets	6-inch
West side Ensor street, opposite Oliver street	6-inch
Southwest corner Maryland and Lafayette avenues	6-inch
Northwest corner Lexington street and Park avenue	6-inch
Northwest corner Holliday and Pleasant streets	6-inch
Northwest corner Bloom street and Druid Hill avenue	6-inch
Northwest corner Bloom and Division streets	6-inch
Northeast corner Lafayette avenue and John street	6-inch
Southeast corner Davis and Saratoga streets	6-inch
Northeast corner Park avenue and Mosher street	6-inch
Northwest corner McElderry and Eden streets	6-inch
Southeast corner McElderry and Caroline streets	6-inch
Northwest corner McElderry and Bond streets	6-inch
Southeast corner McElderry and Bond streets	6-inch
Southeast corner McElderry and Somerset streets	6-inch
Northeast corner Fort avenue and Haubert street	6-inch
Northeast corner Chestnut and Lexington streets	6-inch
Southwest corner Patterson Park avenue and Orleans street.	6-inch
Southeast corner Hamburg and Olive streets	6-inch
Southwest corner Baltimore and Lloyd streets	6-inch
Southeast corner Pratt and Exeter streets	6-inch
Northwest corner Exeter and Fayette streets	6-inch
Southwest corner Mosher and Division streets	6-inch
Northeast corner Division street and Lafayette avenue	6-inch
Southwest corner Division and Lanvale streets	6-inch
Northwest corner Fulton and Patterson avenues	6-inch
Northwest corner Carey and Gold streets	6-inch
Southeast corner Calhoun and Gold streets	6-inch
Northwest corner Pennsylvania avenue and Gold street	6-inch
Northwest corner Division and Gold streets	6-inch
Southwest corner McCulloh and Gold streets	6-inch
Southeast corner Ashland avenue and McKim street	6-inch
Northeast corner Woodall street and Fort avenue	6-inch
Northwest corner Lexington and Paca streets	6-inch
Northwest corner Lafayette avenue and Brevard street	6-inch
Northwest corner Lanvale and John streets	6-inch
Southwest corner Lanvale and Brevard streets	6-inch
South side Martin street, east of Fort avenue	6-inch
Northeast corner Fayette and Shipley streets	6-inch
Northwest corner Lafayette avenue and Calvert street	6-inch
Northeast corner Lafayette avenue and Charles street	6-inch
Northwest corner Baltimore street and Collington avenue	6-inch
Southwest corner Eastern avenue and Exeter streets	6-inch
Northwest corner Lombard and Wolfe streets	6-inch
East side Francis street, south of Retreat street	6-inch
Southwest corner Eastern avenue and President street	6-inch
Northwest corner President and Fleet streets	6-inch
Southwest corner President and Fleet streets	6-inch

NEW FIRE HYDRANTS—OLD SITES.

Location.	Size.
Northwest corner Charles and Centre streets	6-inch
Southeast corner Eastern and Patterson Park avenues	6-inch
North side Frederick avenue, west of Garrison lane	6-inch
Northwest corner Chester street and Eastern avenue	6-inch
Northwest corner Eastern avenue and Washington street	6-inch
Southwest corner Frederick and Caton avenues	6-inch
Northwest corner German and Paca streets	6-inch
Southeast corner Albemarle and Plowman streets	6-inch
Northeast corner Eastern avenue and Wolfe street	6-inch
Northeast corner Cathedral and Saratoga streets	6-inch
Southeast corner Aliceanna and Albemarle streets	6-inch
Northeast corner Aliceanna and Exeter streets	6-inch
Northeast corner Lafayette and Guilford avenues	6-inch
Southwest corner Broadway and Fayette street	6-inch
Southwest corner Chase street and Park avenue	6-inch
Southeast corner Central and Eastern avenues	6-inch
Southeast corner Aliceanna and Eden streets	6-inch
Northwest corner Eden and Fleet streets	6-inch
Southwest corner Eden and Fleet streets	6-inch
Southwest corner Eden and Gough streets	6-inch
Northwest corner Caroline and Gough streets	6-inch
Southeast corner Edmondson avenue and Schroeder street	6-inch
Northwest corner Eden and Mullikin streets	6-inch
Northwest corner Eden and Orleans streets	6-inch
Northwest corner Eastern avenue and Eden street	6-inch
Northwest corner Eastern avenue and Bond street	6-inch
Northwest corner Eastern avenue and Broadway	6-inch
Northwest corner Central avenue and Lombard street	6-inch
Southwest corner Eden and Pratt streets	6-inch
Southwest corner Baltimore and Eden streets	6-inch
West side Caroline street, north of Gough street	6-inch
Liberty Heights and Berwyn avenues	6-inch
Forrest Park and Springdale avenues	6-inch
Northwest corner Bond and Pratt streets	6-inch
Southeast corner Holliday and Saratoga streets	6-inch
Total number of new fire hydrants (old sites) erected	84

NEW CONCRETE FOUNTAIN TROUGHS ERECTED ON OLD SITES.

Southeast corner Exeter and Front streets.
Southeast corner Madison and North avenues.
Southwest corner Monument and Buren streets.

NEW CONCRETE FOUNTAIN TROUGHS ERECTED ON NEW SITES.

Northeast corner Guilford avenue and Saratoga street.
Southwest corner Maryland avenue and Trenton street.
Northwest corner Forrest and Lexington streets.
Northeast corner Eden and Monument streets.
North side Frederick avenue, west of Gwynn's Run.

NEW IRON FOUNTAIN TROUGHS ERECTED FOR S. P. C. A.

Northwest corner Light and Conway streets.
Liberty street and Park avenue, south of Fayette street.

FOUNTAINS REMOVED.

From northwest corner Frederick avenue and Catherine street to north side Frederick avenue, west of Gwynn's Run.

FIRE HYDRANTS USED BY THE UNITED RAILWAYS AND ELECTRIC COMPANY FOR SPRINKLING STREETS.

May	5,161
June	5,313
July	5,898
August	5,330
September	4,404
Total	26,106

METER VAULTS BUILT DURING 1913.

Vaults built for ⅝-inch meters	18
Vaults built for ¾-inch meters	8
Vaults built for 1 -inch meters	7
Vaults built for 1½-inch meters	12
Vaults built for 2 -inch meters	8
Vaults built for 3 -inch meters	4
Vaults built for 4 -inch meters	3
Vaults built for 6 -inch meters	4
Total	64

METERS PACKED DURING 1913.

⅝-inch meters	593
¾-inch meters	392
1 -inch meters	215
1½-inch meters	114
2 -inch meters	108
3 -inch meters	61
4 -inch meters	22
6 -inch meters	14
Total	1,519

SAWDUST USED IN PACKING METERS DURING 1913.

Bushels sawdust used	3,050

WATER RENT BILLS DELIVERED FOR COLLECTOR OF WATER RENT'S OFFICE DURING 1913.

Number of bills delivered	65,000

ABANDONED MAINS AND CHANGED SERVICES.

Location.	From.	Length.
McComas st., bet. Johnson and Gould sts.......	1½″ to 6″	800′
St. Paul st., bet. Scrabble al. and Mulberry st...	2 ″ to 20″	100′
Dallas st., bet. Baltimore and Monument sts....	2 ″ to 4″	1,100′
Lancaster st., bet. Broadway and Bond st......	3 ″ to 6″	500′
Ann st., bet. Thames st. and water's edge.......	3 ″ abandoned	250′
Low st., bet. East and High sts................	3 ″ to 6″	600′
Watson st., bet. Central ave. and High st......	3 ″ to 6″	1,200′
Alley east of Charles st., north of Biddle st.....	3 ″ to 6″	200′
Waesche st., bet. Myrtle ave. and Fremont st...	3 ″ to 6″	300′
Chestnut st., bet. Fayette and Gay sts.........	3 ″ to 6″	1,400′
Frederick ave., west from Millington lane......	3 ″ to 10″	200′
Trinity st., bet. Albemarle and Exeter sts......	3 ″ to 6″	400′
Fayette st., bet. Diamond alley and Greene st..	3 ″ to 10″	175′
Charles st., bet. Hill and Lee sts...............	3 ″ to 6″	400′
Lloyd st., bet. Baltimore and Lombard sts......	3 ″ to 6″	475′
McKim st., bet. Madison and Eager sts.........	3 ″ to 6″	950′
Willow st., bet. McKim st. and Harford ave....	3 ″ to 6″	300′
Ashland ave., bet. McKim st. and Harford ave..	3 ″ to 6″	450′
Madeira st., bet. Jefferson and Monument sts...	3 ″ to 6″	700′
Pratt st., bet. Central avenue and Lloyd st.....	3 ″ to 6″	250′
Garrett alley, bet. Eutaw and Paca sts.........	3 ″ to 6″	150′
Albemarle st., bet. Stiles and Trinity sts.......	3 ″ to 6″	500′
Fairmount ave., bet. Bond st. and Central ave..	3 ″ to 6″	1,050′
Fayette st., bet. Bond st. and Broadway........	3 ″ to 6″	450′
Hickory ave., bet. 36th and 37th sts............	3 ″ to 6″	600′
Caroline st., bet. Bank and Pratt sts............	3 ″ to 10″	900′
Eden st., bet. Fayette and Madison sts.........	3 ″ to 6″	700′
May st., bet. Eden and Caroline sts............	3 ″ to 6″	250′
Mullikin st., bet. Caroline and Eden sts.........	3 ″ to 6″	400′
Maryland ave., bet. Lafayette ave. and Falls rd..	4 ″ to 6″	350′
Lanvale st., bet. Tiffany alley and Madison ave..	4 ″ to 6″	100′
Bloom st., bet. Eutaw Pl. and Pennsylvania ave.	4 ″ to 6″	1,600′
McElderry st., bet. Aisquith and Caroline sts...	4 ″ to 6″	1,150′
Mosher st., bet. Eutaw Place and Brevard st....	4 ″ to 6″	1,200′
Hanover st., bet. Cross and Race sts...........	4 ″ to 12″	250′
Gold st., bet. McCulloh and Calhoun sts........	4 ″ to 6″	1,975′
Division st., bet. Dolphin and Mosher sts........	4 ″ to 10″	1,200′
McMechen st., bet. Druid Hill av. and Division st.	4 ″ to 20″	150′
Reservoir st., bet. Brookfield ave. and Mt. Royal Terrace	4 ″ to 10″	500′
Collington ave., bet. Fayette and Orleans sts....	4 ″ to 6″	850′
Mullikin st., bet. Caroline and Bond sts........	4 ″ to 6″	400′
Lafayette ave., bet. Charles and Calvert sts....	4 ″ to 6″	750′
West side Paca st., bet. Lexington and Clay sts.	4 ″ to 6″	200′
Fayette st., bet. Fallsway and Front st........	4 ″ to 10″	180′
Martin st., north from Fort ave................	4 ″ to 6″	475′
Heath st., bet. Charles and Harmon sts........	4 ″ to 6″	125′
Caroline st., bet. Eastern ave. and Bank st.....	4 ″ to 10″	400′
Gough st., bet. Bond st. and Central ave.......	4 ″ to 6″	1,050′

ABANDONED MAINS AND CHANGED SERVICES.

Location.	From.	Length.
Eden st., bet. Canton ave. and Pratt st.	4″ to 6″	1,650′
Eastern ave., bet. Broadway and Central ave.	4″ to 6″	1,550′
Bond st., bet. Eastern ave. and Pratt st.	4″ to 6″	1,375′
Lombard st., bet. Exeter st. and Broadway	4″ to 6″	2,350′
Exeter st., bet. Stiles and Fawn sts.	4½″ to 6″	250′
North side Fayette st., bet. Schroeder st. and Carrollton ave.	6″ to 10″	875′
Wilson st., bet. Eutaw Place and Morris alley	6″ to 30″	150′
Henderson's Wharf, foot of Wolfe st.	6″ to 10″	225′
South side Ostend st., bet. Sharp and Howard sts.	6″ to 6″	400′
Baltimore st., bet. Front and Albemarle sts.	6″ to 10″	200′
Frederick ave., bet. Van Bibber and Dorseys lanes	8″ to 12″	1,500′
East Falls ave., bet. Stiles and Fleet sts.	8″ to 16″	725′
Cross st., bet. Hanover and Race sts.	10″ abandoned	275′
Frederick ave., bet. Browns la. and Catherine st.	12″ to 12″	900′
Buren st., bet. Madison and Front sts.	16″ abandoned	850′
McMechen st., at Park ave.	20″ to 30″	150′
Madison st., bet. Guilford ave. and Buren st.	30″ to 20″	250′
Total abandoned during year (8 $^{90}/_{5280}$ miles)		42,330′

MISCELLANEOUS WORK.

Clogged services relieved	75
Clogged meters relieved	34
Clogged hydrants relieved	21
Clogged fountains relieved	16
Clogged valves relieved	19

SERVICES DESTROYED BY ELECTROLYSIS AND REPAIRED BY CONSTRUCTION DIVISION—1913.

January 21—1025-27 South Charles street	¾″ lead-lined service
February 17—2737 Eastern avenue	¾″ lead-lined service
April 26—832 East Pratt street	¾″ lead-lined service
May 9—2707 Eastern avenue	¾″ lead-lined service
May 10—2713 Eastern avenue	¾″ lead-lined service
May 10—2719 Eastern avenue	¾″ lead-lined service
May 20—507 South Bond street	¾″ lead-lined service
June 13—2709 Eastern avenue	¾″ lead-lined service
June 20—1747 Abbottston street	¾″ lead-lined service
July 1—Eutaw street, south of Camden	¾″ lead-lined service
July 1—2520 East Federal street	¾″ lead-lined service
July 10—2027 Eastern avenue	¾″ lead-lined service
July 11—2301 Boston street	¾″ lead-lined service
August 29—2729 Eastern avenue	¾″ lead-lined service
September 28—2727 Eastern avenue	¾″ lead-lined service
October 12—2715 Eastern avenue	¾″ lead-lined service
October 22—405 East Fort avenue	¾″ lead-lined service

PUMPS POSTED BY ORDER OF HEALTH DEPARTMENT.

Clifton and Windsor avenues, posted August 2.

WELLS FILLED UP.

111 Dolphin street, January 17.
223 Herring court, April 4.
Northeast corner Caroline and Lombard streets, June 10.
915 Hanover street, October 16.
901 Leadenhall street, October 16.
151 West Henrietta street, October 16.
1100 South Eutaw street, October 17.

NUMBER OF FOUNTAINS, FIRE HYDRANTS, METERS AND BLOWS IN USE ON DECEMBER 31, 1913.

Fountains	244
Fire hydrants	3,589
Meters	3,600
Blows	442
Blows (sewer inlets)	198
Fire hydrants erected (new sites), 1913	138
Fire hydrants erected (old sites), 1913	84

FIRE HYDRANTS IN CITY NOW USING COUNTY WATER THROUGH METERS.

Southeast corner Edmondson avenue and Nineteenth street.
Southwest corner Old Frederick road and Loudon avenue.
Southwest corner Old Frederick road and Irving avenue.
Southwest corner Old Frederick road and Augusta avenue.
Northeast corner Augusta and Massachusetts avenues.
Southeast corner Augusta and Connecticut avenues.
Northeast corner Irving and Massachusetts avenues.

COUNTY PLUGS USING CITY WATER IN 1913.

Location.	Rate per Year.
Southeast corner Second and Toone streets, Canton	$25 00
Southeast corner First and Clinton streets, Canton	25 00
Southwest corner Clinton and Eleventh streets, Canton	25 00
Northeast corner Clinton and O'Donnell streets, Canton	25 00
Northeast corner Clinton and Fourth streets, Canton	25 00
Northeast corner Clinton and Eighth streets, Canton	25 00
Southeast corner Hudson street and East avenue, Canton	25 00
First avenue, bet. Tacoma and Maryland avenues, Westport	25 00
Clare street, near Klowman street, Westport	25 00
Maryland avenue, near Nanokin streets, Westport	25 00
Winburn street, bet. Maryland ave. and Patapsco st, Westport	25 00
Maryland avenue and Clare street, Westport	25 00
Kent avenue, bet. Tacoma and Maryland aves., Westport	25 00
Klowman street, opposite Winburn street, Westport	25 00
Kent avenue, bet. Cedar and Patapsco sts., Westport	25 00

LENGTH AND COST OF NEW MAINS COMPLETED IN 1913.

Size in Inches.	Length in Feet.	Cost of Material.	Cost of Labor.	Cost of Hauling.	Cost of Laying Pipe.	Cost of Paving.	Total Cost.	Average Cost Per Foot.
Three-inch	3,356	$1,262 65	$997 04	$55 15	$2,314 84	$258 73	$2,573 57	$0.76 8-10
Four-inch	4,481	2,236 84	1,844 23	120 90	4,201 97	359 50	4,561 47	1.01 8-10
Six-inch	72,380	46,007 80	30,997 45	2,191 97	79,197 22	7,754 34	86,951 56	1.20 1-10
Eight-inch	1,056	751 01	343 44	26 54	1,120 99	110 00	1,230 99	1.16 3-10
Ten-inch	4,638	5,170 33	3,037 50	256 21	8,464 04	1,283 91	9,747 95	2.10 2-10
Twelve-inch	5,461	8,163 29	5,037 80	479 73	13,680 82	955 26	14,636 08	2.68
Sixteen-inch	168	479 73	137 82	23 06	640 61	30 33	670 94	3.99 3-10
Twenty-inch	239	1,046 71	992 47	77 32	2,116 50	1,012 00	3,128 50	13.09
Thirty-inch	797	6,049 16	3,940 95	569 80	10,559 91	723 15	11,283 06	14.15 7-10
Thirty-six-inch	2,000	13,091 77	7,682 55	827 06	21,601 38	640 00	22,241 38	11.12
Forty-eight-inch	2,717	25,177 00	11,467 87	4,091 52	40,736 39	1,032 63	41,769 02	15.37 3-10
Totals	97,293	$109,436 29	$66,479 12	$8,719 26	$184,634 67	$14,159 85	$198,794 52	$2.04 3-10

MAIN CONNECTIONS—1913.

Size in Inches.	Length in Feet.	Cost of Material.	Cost of Labor.	Cost of Hauling.	Cost of Connection.	Cost of Paving.	Total Cost.
Three-inch	551	$316 99	$229 07	$14 05	$560 11	....	$560 11
Four-inch..........	261	374 42	203 30	13 25	590 97	....	590 97
Six-inch...........	811	2,132 18	1,809 50	94 22	4,035 90	$105 00	4,140 90
Ten-inch.	308	479 44	202 27	11 45	693 16	....	693 16
Twenty-inch.......	36	253 91	254 75	13 31	521 97	....	521 97
Forty-eight-inch...	....	130 53	343 80	49 75	524 08	....	524 08
Totals..........	1,967	$3,687 47	$3,042 69	$196 03	$6,926 19	$105 00	$7,031 19

WORK ON NEW MAINS NOT COMPLETED, 1913.

Size in Inches.	Pipe Charged, Feet.	Pipe Laid, Feet.	Cost of Material.	Cost of Labor.	Cost of Hauling.	Cost of Laying Pipe.	Cost of Paving.	Total Cost.
Four-inch	444	180	$152 16	$67 68	$4 78	$224 62	....	$224 62
Six-inch..........	6,433	2,320	3,467 03	1,410 33	146 13	5,023 49	....	5,023 49
Ten-inch	509	296	758 02	467 02	26 84	1,251 88	....	1,251 88
Twelve-inch......	106	100	133 65	85 49	7 25	226 39	....	226 39
Sixteen-inch......	1,092	636	1,989 84	902 04	123 46	3,015 34	....	3,015 34
Twenty-inch	141	132	1,183 77	1,183 57	67 03	2,434 37	....	2,434 37
Forty-eight-inch..	288	240	4,335 80	4,336 36	537 17	9,209 33	....	9,209 33
Totals......	9,013	3,904	$12,020 27	$8,452 49	$912 66	$21,385 42	....	$21,385 42

NEW CONSTRUCTION—NEW SERVICE CONNECTIONS AND FIRE SUPPLIES, BILLED—1913.

Month.	Flat Rate Services.						Metered Services—Billed.										Unmetered and Fire Services—Billed.											Total Cost.
	$6.00	$8.00	$12.00	Cost.	Amount Rec'd.	Net Profit or Loss.	⅝	¾	1	1½	2	3	4	6	Cost.	Amount Rec'd.	¾	1	1½	2	3	4	6	8	10	Cost.	Amount Rec'd.	
January	67	5	103	$2,191 58	$1,678 00	*$513 58	2	1	..	1	7	..	..	..	$790 04	$578 90	7	39	1	1	..	..	..	..	..	$733 69	$797 32	$3,715 31
February	31	......	114	1,653 91	1,554 00	*99 91	1	4	3	3	3	4	..	..	993 10	522 86	14	32	...	2	1	2	2	..	..	872 49	959 76	3,519 50
March	56	3	168	2,535 32	2,376 00	*159 32	2	3	1	4	3	3	..	1	1,377 33	240 57	9	11	2	..	..	1	..	..	..	301 47	329 17	4,214 12
April	102	1	300	3,802 90	4,220 00	417 10	1	1	2	3	5	1	..	..	832 00	344 94	22	35	4	4	2	1	..	..	..	781 91	860 13	5,416 81
May	84	...	151	2,737 79	2,316 00	*421 79	6	..	1	2	3	3	..	..	824 30	483 19	18	50	3	1	..	..	1	..	..	837 06	902 91	4,399 15
June	117	2	94	2,532 96	1,846 00	*686 96	4	..	2	2	2	3	2	..	1,223 91	353 16	12	14	1	..	1	1	1	..	..	518 02	563 17	4,274 89
July	82	4	219	3,263 62	3,152 00	*111 62	3	..	3	3	2	..	1	..	806 40	330 67	34	23	...	4	..	1	1	..	..	837 18	918 61	4,907 20
August	98	....	263	3,905 34	3,744 00	*161 34	.	8	2	...	3	1	..	..	589 33	91 52	35	49	6	2	..	2	2	1	..	1,575 83	1,730 31	6,070 50
September	138	3	225	3,838 12	3,552 00	*286 12	3	2	3	1	2	2	1	..	1,247 89	440 65	24	46	2	2	2	1	2	..	..	1,300 33	1,416 59	6,386 34
October	139	1	241	3,927 06	3,734 00	*193 06	12	9	5	5	3	..	3	..	1,748 15	429 97	26	126	3	1	1	1	2	1	..	3,556 96	3,906 83	9,232 17
November	64	13	118	2,230 05	1,904 00	*326 05	7	13	4	1	1	1	1	1	1,622 85	382 73	17	89	3	1	..	1	..	..	.	809 30	890 24	4,662 20
December	69	..	181	2,939 87	2,586 00	*353 87	.	1	7	2	1	7	1	3	2,957 49	936 21	11	102	6	1	..	1	1	..	..	1,071 35	1,171 83	6,968 71
Totals	1,047	32	2,177	$35,558 52	$32,662 00	*$2,896 52	41	42	33	27	35	25	9	5	$15,012 79	$5,135 37	229	616	31	19	7	12	12	2	..	$13,195 59	$14,446 87	$63,766 90

* Denotes "Loss."

NEW CONSTRUCTION—NEW VALVES, HYDRANTS AND FOUNTAINS—1913.

Month:	Valves.														Hydrants.				Fountains.		Billed.	Total Cost.
	2	3	4	6	8	10	12	16	20	30	36	40	48	Cost.	Old Style.	New Single Nozzle.	New Double Nozzle.	Cost.	No.	Cost.	Cost.	
January	3	2	4	1	..	..	..	..	..	..	..	..	..	$187 61	....	8	...	$694 61	1	$10 71		$892 92
February	4	..	5	..	..	..	..	..	..	..	..	..	..	195 99	2	27	.....	2,182 81	3	52 66	41 67	2,473 13
March	1	..	3	1	..	..	..	..	..	..	..	..	..	119 69	1	12	....	915 31	1	32 27		1,067 27
April	.	4	..	..	..	..	..	..	..	..	..	..	..	68 57	....	28	....	1,779 39	1	31 70	489 09	2,368 75
May	1	4	7	1	..	2	..	..	..	..	..	..	..	760 99	2	18	....	1,502 44	6	158 82	.	2,422 25
June	..	..	2	..	..	1	..	..	..	..	..	..	..	125 30	....	20	.....	1,567 09	2	65 48		1,757 87
July	1	..	1	..	..	..	..	..	..	..	..	..	..	49 50	....	32	...	2,035 22	1	42 87	.	2,127 59
August	1	2	1	2	..	..	..	..	..	..	1		..	161 19	1	31	2	2,482 89	....	....	55 63	2,699 71
September	5	2	2	2	..	..	..	..			..	..	..	244 18	1	24	...	1,693 16	1	27 54	17 13	1,982 01
October	..	1	1	..	..	..	..			..	..	..	..	38 76	.....	27	.	2,015 70	2	79 97		2,134 43
November	1	..	1	..	..	..	..	..		2			..	170 40	..	17	.	1,420 66	2	63 23		1,654 29
December	1	6	1	..	..	..		.		1			..	551 39	....	22	1	1,516 12	2	127 78	..	2,195 29
Totals	18	21	28	7	.	3				3	1	.		$2,673 57	7	266	3	$19,805 40	22	$693 03	$603 52	$23,775 51

TOTAL NUMBER OF FEET OF EACH SIZE MAIN IN SERVICE, INCLUDING EXTENSIONS MADE DURING 1913.

	1½″	2″	3″	4″	4½″	6″	8″	10″	12″	16″	18″	20″	24″	30″	36″	40″	48″
Pipe in ground (feet) Dec. 31, 1912	16,721	97,878	506,842	747,033	54,237	1,297,969	52,778	457,416	133,585	56,662	6,058	240,085	1,787	75,700	33,162	61,993	24,672
Pipe laid during 1913	..	....	3,174	4,150	.	70,055	1,073	4,284	5,788	815		321		362	700		525
Totals	16,721	97,878	510,016	751,183	54,237	1,368,024	53,851	461,700	139,373	57,477	6,058	240,406	1,787	76,062	33,862	61,993	25,197
Credit abandoned mains during 1913	800	1,200	13,750	19,830	250	1,850	2,225	275	900	850	. .	150		250			
Total number of feet of pipe in ground in use Dec. 31, 1913	15,921	96,678	496,266	731,353	53,987	1,366,174	51,626	461,425	138,473	56,627	6,058	240,256	1,787	75,812	33,862	61,993	25,197

Total number of feet of all sizes of pipe—3,913,495—equal to—741$\frac{1015}{5280}$ miles

REPAIRS TO AND MAINTENANCE OF METERS AND SERVICES, NOT BILLED—1913.

Month	Domestic Services Repaired.									Fire Services Repaired.							Meters Repaired.									Services Transferred.		Locating Stops.	Stop Boxes Lowered.		Ferrules Drawn for Leaks.		Ferrules Drawn on Abandoned Supplies.		Inspections.					Work Done on Order Collector of Water Rents.							Total Cost.
	⅝	¾	1	1½	2	3	4	6	Cost.	2	3	4	6	8	10	Cost.	⅝	¾	1	1½	2	3	4	6	Cost.	No.	Cost.	Cost.	No.	Cost.	No.	Cost.	No.	Cost.	Plumbing.	Meters.	No Leak.	Private Pipe Leaks.	Cost.	Turn Ons.	Turn Offs.	Ferrules Drawn.	Ferrules Return'd	Cost.	Amount Received.	Distributing Bills and Notices.	
January	3	49	8	22	3				$1,446 70								75	40	27	8	28	27	3	6	$937 74		$853 60	$220 55		$3 56	33	$157 28	32	$125 72	74	1066	34	73	$1,079 26	28	86	10	1	$330 63	$90 00	$28 00	$5,182 94
February	3	50	4	23	1		1		541 32								41	31	8	2	22	17	2	1	540 01		354 31	80 58			30	125 03	29	106 56	62	182	28	70	665 53	33	63	7	1	239 48	34 00		2,652 82
March	2	46	2	18	2				863 50				1			$1 63	23	37	7	5	9	13	5	1	416 21		511 38	124 29		4 25	24	114 70	33	93 76	64	279	39	68	811 14	27	33	6		228 79	43 00		3,169 65
April	2	81	3	26	5				824 22								51	30	11	18	27	21	11		827 07		1,091 70	66 64		6 85	19	91 86	11	42 54	87	61	41	54	709 80	37	17	9	1	304 41	21 00		3,965 09
May	10	82	4	27	1				1,663 87								8	13	13	12	21	17	4	2	567 64		1,400 37	86 62		46 25	29	132 80	15	55 52	76	157	48	84	1,070 30	35	51	7	2	286 20	48 00	276 00	5,585 57
June	6	93	3	20	3	1			1,056 05									4	16	10	19	20	3	1	356 33		469 06	61 31		7 44	26	113 28	31	62 86	104	349	72	105	1,253 04	166	365	13	1	687 26	163 00		4,066 63
July	1	98	3	18	3				1,157 51								5	32	21	22	29	16	8	1	702 56		1,027 02	106 53		25 49	28	118 76	15	61 71	72	60	63	83	1,071 87	167	249			458 06	116 00		4,729 71
August	15	110	2	19	3	1	1		1,320 02							3 12	19	24	9	21	21	13	6	1	512 83		872 93	90 64		2 37	27	114 28	11	43 14	84	132	74	87	1,120 42	57	13	3	1	304 54	35 00	14 00	4,398 29
September	2	108	2	30	1		1		1,503 39			2				9 72		6	14	19	26	10	7	2	614 01		1,103 61	86 85		24 80	22	112 18	19	80 99	88	147	57	90	1,136 16	53	28	6	1	281 81			4,953 52
October	2	93	7	19	3	3	2		1,195 58								17	59	34	27	21	25	7	1	923 81		2,788 78	166 17		2 95	35	145 74	12	73 26	94	122	59	90	1,052 66	33	72			267 00	69 00		6,615 95
November	4	96	13	29	2	1	1		1,140 66				1			62 28	9	46	15	11	21	7	9	1	594 46		1,582 83	81 65		12 22	23	118 75	20	95 88	112	788	50	99	1,373 08	35	55	2		217 87	102 00	194 00	5,473 68
December	6	90	9	18	5		1	1	1,899 32								5	70	14	23	11	23	12	2	869 93		1,066 28	53 03		15 03	37	168 16	26	51 54	81	1129	44	93	1,471 25	25	76	14	3	313 62	76 00		5,908 16
Totals.	56	996	60	269	32	6	7	1	$14,612 14			2	2			$76 75	253	392	189	178	255	209	77	19	$7,862 60		$13,121 97	$1,224 86		$151 21	333	$1,512 82	254	$893 48	998	4472	609	996	$12,814 51	696	1108	77	11	$3,919 67	$797 00	$512 00	$56,702 01

REPAIRS TO AND MAINTENANCE OF VALVES, HYDRANTS AND FOUNTAINS—1913.

Month.	Valves Repaired.														Hydrants Repaired and Moved.							Fountains Repaired and Moved.			Billed.	Flushing and Cleaning Fixtures.				Total Cost.
	2	3	4	6	8	10	12	16	20	30	36	40	48	Cost.	Old 4	Old 5	Ludlow.	1 Noz.	2 Noz.	Repaired Cost.	Moved Cost.	No.	Repaired Cost.	Moved Cost.	Cost.	Hydrants.	Blows.	Fountains.	Cost.	
January	5	6	8	4		1	1	4						$316 37	25	44	3	50	25	$1,028 14		28	$246 44		$68 22	1,360	420	20	$1,653 60	$3,312 77
February	1	3	7	1				1						161 08	20	23	1	28	14	532 57		14	56 61		13 15	1,370	455	40	1,644 12	2,407 53
March	5	7	3	9		2		1	2					334 07	10	27		28	10	475 69	$31 83	38	184 16		40 35	1,165	370	100	1,127 35	2,193 45
April	3	8	12	10	1	3			5		1			247 23	13	22		48	15	665 95	25 72	57	290 55			1,185	385	240	932 00	2,161 45
May	5	12	22	12		6		1		2				553 49	21	38		52	25	922 08		65	282 70	$4 25	11 49	1,325	396	265	822 50	2,596 51
June	4	17	19	11	3	2	1	2	2		1			737 44	22	34	1	39	17	645 41		15	157 01		62 32	1,275	382	255	876 00	2,478 18
July	8	9	12	6		3			1					554 65	11	36		53	30	766 41	79 15	40	114 07		111 92	1,250	375	275	870 00	2,496 20
August	5	5	13	16	1	13	1	1	3	2				1,053 37	26	28	1	72	15	871 82	69 43	25	99 50		36 66	1,300	390	260	852 00	2,982 78
September	5	12	19	9		1			12	8				1,331 13	31	33		68	20	870 86	119 04	43	144 75		75 74	1,200	360	240	758 00	3,299 52
October	3	15	13	8	1	3	2	1	6					1,159 41	33	39		49	16	825 60	49 11	52	140 40		54 11	1,325	400	265	843 00	3,071 63
November	7	9	10	25		2			3	1				971 09	26	32		33	18	522 04	75 46	38	107 09		38 67	1,150	345	230	618 00	2,332 35
December	4	5	21	15		6		1	5	2				1,055 94	30	43		71	26	1,054 35	20 65	43	145 48		54 44	1,300	390	260	924 00	3,254 86
Totals.	55	98	159	126	6	42	5	12	39	15	2			$8,475 27	268	399	6	591	231	$9,180 92	$470 39	458	$1,968 76	$4 25	$567 04	15,205	4,668	2,450	$11,920 57	$32,587 23

DATA AS TO BILLS FOR METER AND PLUMBING WORK DONE DURING 1913.

Month.	No. Bills Sent Out.	Cost of Material.	Cost of Labor.	Total Cost.	Amount of Bills.	No. Bills Paid.	No. Bills Unpaid.	Amount Received.	Amount Due.	Amount Received During 1913 for 1910-11-12 Work.
January.. ..	272	$3,418 95	$3,067 88	$6,486 83	$5,452 97	240	32	$5,111 03	$341 94	$4,860 49
February....	110	2,506 77	1,314 35	3,821 12	2,790 15	89	21	2,668 52	121 63	1,405 34
March.......	154	1,409 62	1,294 14	2,703 76	2,425 11	120	34	2,160 37	264 74	393 19
April........	114	816 36	848 19	1,664 55	1,714 89	94	20	1,569 39	145 50	55 90
May.........	277	3,193 04	2,343 68	5,536 72	4,752 15	227	50	4,162 50	589 65	55 89
June	211	2,976 64	3,085 67	6,062 31	5,841 70	147	64	5,141 63	700 07	674 63
July.........	234	1,894 38	1,838 79	3,733 17	3,330 57	170	64	2,807 12	523 45	1,023 59
August......	204	1,646 30	2,743 50	4,389 80	4,708 10	138	66	2,266 44	2,441 66	54 12
September ..	312	3,124 10	2,960 76	6,084 86	5,707 61	211	101	3,954 95	1,752 66	39 09
October	297	4,864 93	3,227 60	8,092 53	7,843 06	136	161	4,489 70	3,353 36	323 88
November...	169	2,173 08	1,505 16	3,678 24	3,216 24	28	141	232 89	2,983 35	2,448 86
December...	190	1,629 85	1,621 37	3,251 22	2,776 44	12	178	82 00	2,694 44	31 88
Totals....	2,544	$29,654 02	$25,851 09	$55,505 11	$50,558 99	1,612	932	$34,646 54	$15,912 45	$11,366 86

REPAIRS TO AND MAINTENANCE OF METERS AND SERVICES, BILLED—1913.

Month.	Domestic Services Repaired.									Fire Services Repaired.							Meters Repaired.									Total Cost.
	5/8	3/4	1	1½	2	3	4	6	Cost.	2	3	4	6	8	10	Cost.	5/8	3/4	1	1½	2	3	4	6	Cost.	
January	1	69	..	11	..	..	..	..	$711 21	..	..	..	..	..	..	....	..	..	1	...	1	4	..	..	$17 10	$728 31
February	1	56	11	11	..	1	..	..	509 47	..	..	..	..	..	..	....	..	2	1	2	2	1	..	..	38 72	548 19
March	...	60	2	11	..	..	..	2	468 85	..	..	1	..	..	..	$6 40	..	..	1	...	..	..	2	..	91 09	566 34
April	...	74	4	14	..	1	..	..	538 16	..	..	..	..	..	..	....	1	2	1	...	1	1	1	..	52 07	590 23
May	...	109	2	16	..	..	..	..	1,119 33	..	..	..	..	..	..	....	1	1	..	1	2	2	..	..	67 91	1,187 24
June	1	92	3	7	..	..	1	..	861 00	..	..	..	..	..	..	....	..	..	..	...	..	3	..	..	35 08	896 08
July	2	107	7	11	3	..	1	..	966 25	..	..	..	..	..	..	....	..	1	1	1	1	1	..	..	110 08	1,076 33
August	...	94	4	7	1	2	..	..	771 74	..	..	..	..	..	..	....	3	2	1	...	1	3	..	..	20 38	792 12
September	...	106	..	5	2	..	1	..	944 92	..	..	1	..	..	..	22 50	..	..	1	1	1	..	..	1	55 96	1,023 38
October	2	120	3	2	1	..	..	..	923 68	..	..	..	..	..	..	....	..	..	..	1	1	3	3	..	58 38	982 06
November	1	109	2	2	1	..	1	..	808 24	..	..	..	..	..	..	....	5	1	1	3	..	2	..	1	35 35	843 59
December	...	93	4	5	..	..	1	..	876 59	..	..	..	..	..	..	....	..	2	..	1	..	..	..	..	17 83	894 42
Totals	8	1,089	42	102	8	4	5	2	$9,499 49	..	..	2	..	..	..	$28 90	10	11	8	10	10	20	6	2	$599 95	$10,074 29

REPAIRS TO PAVING BY WATER DEPARTMENT—1913.

Month.	Cement Paving.		Brick Paving.		Asphalt Paving.		Ramming.		Total Feet.	Total Cost.
	Sq. Feet.	Cost.	Sq. Feet.	Cost.	Sq. Feet.	Cost.	Sq. Feet.	Cost.		
January.......	293	$72 40	6,635	$482 62	....	....	55,256	$2,482 55	62,184	$3,037 57
February.. ..	107	25 75	2,494	180 98	....	....	36,401	1,638 19	39,002	1,844 92
March.........	471	115 40	5,731	413 10	....	....	41,091	1,855 00	47,293	2,383 50
April..........	704	173 79	8,043	585 85	....	....	47,739	2,148 28	56,486	2,907 92
May...........	744	183 33	9,168	663 85	....	....	56,359	2,536 65	66,271	3,383 83
June..........	516	126 87	7,926	575 85	....	....	55,233	2,485 66	63,675	3,188 38
July...........	682	167 91	6,755	490 71	....	....	56,796	2,555 66	64,233	3,214 28
August........	843	209 53	6,413	465 95	....	....	61,343	2,761 49	68,599	3,436 97
September.....	449	109 50	6,722	487 65	....	....	59,560	2,684 01	66,731	3,281 16
October.......	582	142 90	8,072	585 52	....	....	69,192	3,114 17	77,846	3,842 59
November.....	596	144 66	6,104	442 67	....	....	61,480	2,776 60	68,180	3,363 93
December.....	437	105 81	7,892	572 39	....	....	63,856	2,873 71	72,185	3,551 91
Totals......	6,424	$1,577 85	81,955	$5,947 14	....	....	664,306	$29,911 97	752,685	$37,436 96

OPERATING EXPENSE—1913.

Month.	Inspections.			Repairing Sunken Ditches.		Care of Old City Hall.	Office Assistants.	Emergency Gangs.	Stock Room Labor.	Repairing and Sharpen. Tools.	Repair Wagons & Shoeing Horses.	Sundries.	Total Cost.
	Paving.	Street Openi'gs	Cost.	No.	Cost.	Cost.	Cost.	Cost.	Cost.	Cost.	Cost.	Cost.	
January	1,991	525	$2,021 53	684	$2,933 71	$497 02	$352 97	$648 28	$273 25	$165 67	$21 05	$260 95	$7,174 43
Febuary	1,265	390	1,275 31	244	1,050 00	392 75	327 25	542 29	224 94	164 58	139 64	280 72	4,397 48
March	1,735	537	1,939 94	467	1,759 83	505 75	332 97	634 70	220 00	137 26	173 71	51 99	5,756 15
April	2,025	650	2,460 29	341	1,425 92	434 00	352 40	389 97	277 25	158 07	87 37	9 03	5,594 30
May	2,025	650	2,580 38	604	2,396 03	482 25	364 94	425 98	260 00	173 30	160 05	117 27	6,960 20
June	1,875	625	2,236 63	542	2,001 99	394 75	346 63	294 02	220 56	191 19	224 35	611 64	6,521 76
July	1,885	630	2,350 00	380	1,455 99	471 75	364 27	222 66	248 75	321 59	195 23	115 09	5,745 33
August	1,950	650	2,554 75	485	2,122 16	519 00	370 12	206 48	249 50	218 98	304 51	76 74	6,622 18
September	1,840	615	2,584 00	514	1,987 52	517 00	357 36	253 39	222 06	164 53	173 41	191 52	6,450 79
October	1,980	660	2,870 25	426	1,632 18	607 26	362 97	327 01	260 12	232 50	480 73	208 06	6,981 08
November	1,725	575	2,464 00	293	1,098 32	548 98	356 49	349 21	276 06	220 64	643 98	126 20	6,083 88
December	1,950	650	2,602 00	416	1,536 27	695 60	384 67	327 94	312 50	316 77	337 82	984 08	7,497 65
Totals	22,246	7,157	$27,939 08	5,396	$21,399 86	$6,066 11	$4,273 04	$4,621 93	$3,044 99	$2,465 08	$2,941 85	$3,033 29	$75,785 23

REPAIRS TO AND MAINTENANCE OF MAINS—1913.

Month.	Joints Caulked													
	2	3	4	6	8	10	12	16	20	30	36	40	48	Cost.
January	4	6	10	11	6	13	2	3	5	1	..	.	.	$450 70
February	3	12	11	8	3	8	8	.	6	1	.	1	...	399 54
March	2	5	12	18		25	5	3	4	....	2	1	.	522 00
April		6	21	37	2	22	1	.	5	6	1	1	3	444 51
May	5	4	12	21	3	19	3	1	5	..	1			788 49
June		17	12	18	1	10	10	2	7	1	2			351 42
July	1	15	21	19	3	5	3	4	9	1	3	...	1	454 24
August	9	11	14	23	2	5	1	4	13	2	4	...	1	568 27
September	5	7	18	30	1	10	5	7	9	72	1	1		717 94
October	3	17	22	21	2	10	11	4	10	2				684 07
November	3	5	20	34	3	27	3	8	2	1				635 77
December	3	14	15	19		16	4	1	6		1	1		729 44
Totals	38	119	188	259	26	170	59	37	81	87	15	5	5	$6,746 39

Month.	Breaks Repaired.													
	2	3	4	6	8	10	12	16	20	30	36	40	48	Cost.
January	7	11	3	11	3	1	1	1	...	.	.	...	...	$609 71
February	6	14	8	5	...	...	...	...	...	.	.	...	.	475 07
March	2	2	4	7	...	...	.	.	...	...	...	..	..	319 70
April	...	1	2	1	...	1	...	.	...	.	..	...	..	151 03
May		10	4	11	...	1	.	...	...	1	...	...	.	553 22
June	4	9	9	9	1	1	9	...	1	.	..	.	...	862 38
July	2	16	4	5	...	2	...	1	2	1	3	.	.	845 33
August	4	14	8	8	1	6	.	...	...	..	2	..	.	732 89
September	6	18	5	8	...	2	2	.	...	1	.	.	.	658 12
October	10	24	13	5	...	2	...	...	2	1			.	794 85
November	4	22	12	10	...	1	.	.	1	1	.	...		1,232 05
December	6	16	11	8	...	3	...	3	...	.	.	...		1,131 97
Totals	51	157	83	88	5	20	12	5	6	5	5		..	$8,366 32

Month.	Mains Raised, Lowered or Moved.													
	2	3	4	6	8	10	12	16	20	30	36	40	48	Cost.
January	2	10	5	8	1	9	2	...	.	..	...	..		$348 91
February	...	3	6	7	...	...	...	.	.	2	.	..	..	255 56
March	...	6	6	9	..	1	1	.		3	.	..	1	399 60
April	1	3	5	5	.	2	...	...	.	1	...		.	173 02
May	1	16	10	14	2	4	..	2			.	.		775 12
June	...	7	5	5	1	4	10	1	..	.				319 01
July	2	3	10	14	1	5	17	..	..	12	.			1,077 93
August	1	17	5	30	...	13	1	.	.	12	...	.	.	1,453 36
September	7	13	17	31	3	2	6	..	1	25	.			2,591 96
October	...	8	7	19	...	5	17	1		24	.		.	3,665 51
November	1	7	11	13	1	2	14	.	.	16	.			1,582 05
December	3	10	6	40	...	4	3	...	.	25				2,393 41
Totals	18	113	93	195	9	51	71	4	1	120	...	...	1	$15,035 74

Month.	Locating Stop.	Locating Mains.	Abandoned Mains.	Billed.	Total Cost.
	Cost.	Cost.	Cost.	Cost.	
January	....	$123 03	$2 06	$1,013 10	$2,547 51
February	.	475 42	22 40	530 83	2,158 82
March		239 48	2 31	615 71	2 098 83
April	...	316 95	28 52	717 87	1,831 90
May		303 77	......	1,762 86	4 183 76
June		110 36	28 96	1,200 05	2,872 18
July	.	311 13	..	1,858 77	4,547 40
August		209 14	30 79	2,581 98	5,576 43
September	....	344 80	15 06	1,893 62	6,221 50
October		267 26	....	1,572 53	6,984 22
November		198 52	87 96	1,066 75	4,803 10
December		144 17	15 44	829 11	5,273 57
Totals	.....	$3,044 03	$263 53	$15,643 21	$49,099 22

REPAIRS TO PAVING BY CITY ENGINEER AND CONTRACTORS—1913.

Month.	Cobble Paving.		Belgian Block.		Vitrified Brick.		Sheet Asphalt.		Asphalt Block.		Bitulithic.		Macadam.		Wood Block.		Total Feet.	Total Cost.
	Sq. Ft.	Cost.	Sq. Ft.	Cost.	Sq. Ft.	Cost.	Sq. Ft.	Cost.	Sq. Ft.	Cost.	Sq. Ft.	Cost.	Sq. Ft.	Cost.	Sq. Ft.	Cost.		
January	50,629	$2,560 50	9,181	$552 32	1,011	$197 86	58	$14 55	437	$101 69	333	$101 64	375	$61 71	24	$8 98	62,048	$3,599 25
February	450	22 20	....	....	230	67 56	368	96 56	....	....	1,700	307 68	....	....	....	....	2,748	494 00
March	21,739	1,095 44	3,845	284 49	630	32 40	99	24 77	590	124 39	....	....	60	3 30	....	....	26,963	1,564 79
April	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
May	56,437	2,756 22	10,652	693 37	1,768	236 35	862	117 32	2,327	339 10	....	....	....	....	73	18 12	72,119	4,160 48
June	27,958	1,371 06	7,303	403 21	930	177 17	27	7 71	191	34 29	344	56 13	....	....	....	....	36,753	2,049 57
July	15,377	736 59	3,586	247 87	74	8 22	485	89 13	2,524	434 43	72	24 80	....	....	....	....	22,118	1,541 04
August	9,903	749 30	2,067	119 30	863	252 69	13	4 43	657	148 80	309	104 38	....	....	....	....	13,812	1,378 90
September	31,269	1,494 29	5,720	352 26	3,946	270 09	41	10 93	691	114 88	410	60 22	60	8 11	166	47 71	42,303	2,358 49
October	16,341	803 30	3,557	241 72	843	173 79	62	20 32	14	4 10	....	....	....	....	18	5 96	20,835	1,249 19
November	....	....	....	....	....	....	673	140 84	....	....	....	....	....	....	....	....	673	140 84
December	23,514	1,175 02	6,182	415 44	1,804	568 10	144	53 26	1,977	372 72	115	43 99	69	14 83	....	....	33,805	2,643 36
Totals	253,617	$12,763 92	52,093	$3,309 98	12,099	$1,984 23	2,832	$579 82	9,408	$1,674 40	3,283	$698 84	564	$87 95	281	$80 77	334,177	$21,179 91

REPORT OF MECHANICAL DIVISION

BALTIMORE, January 22, 1914.

MR. EZRA B. WHITMAN, *Water Engineer.*

DEAR SIR—I herewith respectfully submit my report of work of the Mechanical Division for the year ending December 31, 1913:

WATER PUMPED.

Western Pumping Station:

To Western Upper Service, 518,005,223 gallons; cost per 1,000 gallons, 1.97 cents.

To Eastern Upper Service, 173,447,368 gallons; cost per 1,000 gallons, 2.67 cents.

Coal hauled from railroad siding to boiler-room coal bin, 25 cars; weight of coal, 2,455,600 pounds.

Eastern Pumping Station:

To Eastern High Service, 3,397,902,152 gallons; cost per 1,000 gallons, 0.835 cents.

To Middle Service, 1,015,080,848 gallons; cost per 1,000 gallons, 0.813 cents.

Coal hauled from coal trestle to boiler-room, 158 cars; weight of coal, 16,100,380 pounds.

Mt. Royal Pumping Station:

To Western High Service, 6,900,883,489 gallons; cost per 1,000 gallons. 0.573 cents.

To Middle Service, 2,038,890,552 gallons; cost per 1,000 gallons, 0.623 cents.

Coal unloaded, 238 cars; weight of coal, 24,890,700 pounds.

COAL UNLOADED ON RAILROAD SIDINGS.

Druid Hill Park, 25 cars; weight of coal	2,455,600 pounds
Gay Street Yard, 158 cars; weight of coal	16,103,800 pounds
Mt. Royal Pumping Station, 238 cars; weight of coal	24,890,700 pounds

CAST-IRON PIPE AND FITTINGS.

Inspected and supervised hauling by Supt. of Hauling:	No.	Weight, lbs.
Lengths 3″ cast-iron pipe	500	96,492
Lengths 4″ cast-iron pipe	644	169,905
Lengths 6″ cast-iron pipe	6,500	2,637,550
Lengths 8″ cast-iron pipe	317	179,506
Lengths 10″ cast-iron pipe	550	426,274
Lengths 12″ cast-iron pipe	344	345,054
Lengths 16″ cast-iron pipe	135	235,726
Cast-iron pipe fittings	2,008	336,359

MACHINE SHOP.

Fitted up 1½″ piston post.
Fitted up one hand pump.
Fitted up twenty-five 4″ hydrant screws.
Fitted up twenty-five 5″ hydrant screws.
Fitted up sixteen 3″ tapping valve bodies.
Fitted up twenty-three 4″ tapping valve bodies.
Fitted up two hundred and fifty 6″ tapping valve bodies.
Fitted up eighty-four 2″ valve bodies.
Fitted up sixty-eight 3″ valve bodies.
Fitted up sixty-four 4″ valve bodies.
Fitted up nine hundred and eight 6″ valve bodies.
Fitted up ten 10″ valve bodies.
Fitted up twelve 1″x4½″ brass clamp bolts.
Fitted up twenty-six double streamer bonnets.
Fitted up two hundred and forty-three single streamer bonnets.
Fitted up fifty-eight 2″ Department valve bonnets.
Fitted up fifty 3″ valve bonnets.
Fitted up one hundred and one 4″ valve bonnets.
Fitted up seven hundred and fifty-nine 6″ valve bonnets.
Fitted up nine 10″ valve bonnets.
Fitted up sixty-two 4″ plug cover bottoms.
Fitted up sixty-five 5″ plug cover bottoms.
Fitted up seventy-five 2″ stuffing boxes.
Fitted up one hundred and fifty-two 3″ stuffing boxes.
Fitted up one hundred 4″ stuffing boxes.
Fitted up five hundred and sixty-seven 6″ stuffing boxes.
Fitted up ten 10″ stuffing boxes.
Fitted up twenty-five single streamer coupling caps.
Fitted up one hundred and ninety-four single streamer nozzle caps.
Fitted up twenty-five 4″ large fire hydrant caps.
Fitted up twenty-five 5″ large fire hydrant caps.
Fitted up one hundred and seventy-two 6″ single streamer hydrant caps.
Fitted up three old style fire hydrant large caps.
Fitted up one hundred and twenty-two old style fire hydrant small caps.
Fitted up ten 10″x4″ tapping clamps.
Fitted up thirteen 10″x6″ tapping clamps.
Fitted up two 12″x4″ tapping clamps.
Fitted up five 12″x6″ tapping clamps.
Fitted up five 16″x6″ tapping clamps.

Fitted up nineteen 20″x6″ tapping clamps.
Fitted up one 36″x12″ tapping clamp.
Fitted up one 40″x8″ tapping clamp.
Fitted up two hundred and ninety-five single streamer couplings.
Fitted up twenty-one Worthington dial covers.
Fitted up fifty-five 4″ plug covers.
Fitted up twenty-nine 5″ plug covers.
Fitted up eighteen 5″ ferrule plug covers.
Fitted up nine 3″ flanges.
Fitted up two hundred and forty-six single streamer bonnet glands.
Fitted up seventy-five 2″ glands.
Fitted up one hundred and fifty 3″ glands.
Fitted up seventy-five 4″ glands.
Fitted up five hundred and ninety-two 6″ glands.
Fitted up ten 10″ valve glands.
Fitted up twenty-five double streamer valve guides.
Fitted up two hundred and ninety-one single streamer valve guides.
Fitted up two pump valve guides.
Fitted up two hundred and forty-five single streamer fire hydrants.
Fitted up one mandrel.
Fitted up two hundred and forty-nine large streamer nozzles.
Fitted up two hundred and forty-nine small streamer nozzles.
Fitted up two hundred and eighty-six single streamer opening nuts.
Fitted up two hundred and twenty-four single streamer valve rod nuts.
Fitted up seven hundred and twenty-five 6″ valve nuts.
Fitted up one hundred and twenty-five streamer lock nuts.
Fitted up fifty Union meter gear pins.
Fitted up fifty Union meter yoke bearing pins.
Fitted up two hundred and fifty 6″ streamer coupling pins.
Fitted up seven 20″ pinions for Chapman valves.
Fitted up one 20″ valve pinion.
Fitted up two 4″ Gem meters, piping (B. & O. R. R.).
Fitted up one piston for coal conveyer (Mt. Royal Pumping Station).
Fitted up fifty-one valve plates.
Fitted up twenty-five 6″ single streamer bonnet plates.
Fitted up one hundred and twenty-four single streamer coupling plates.
Fitted up one hundred and seventy-five single streamer valve plates.
Fitted up sixty-five 2″ valve plugs.
Fitted up sixty-seven 3″ valve plugs.
Fitted up one hundred 4″ valve plugs.
Fitted up seven hundred and forty-eight 6″ valve plugs.
Fitted up eleven 10″ valve plugs.
Fitted up six 1″ Union meter posts.
Fitted up two 1½″ Union meter posts.
Fitted up four hundred and eighty-six streamer valve rods.
Fitted up forty-seven rosettes for fountain.
Fitted up fifty 4″ old style fire hydrant screws.
Fitted up twenty-five 5″ old style fire hydrant screws.
Fitted up eighty single streamer valve screws.
Fitted up three hundred and seventy-five streamer opening screws.
Fitted up two 16″ Pratt & Cady valve screws.
Fitted up fifty 2″ valve screws.

Fitted up one hundred and thirty-eight 3″ valve screws.
Fitted up one hundred and fifty-nine 4″ valve screws.
Fitted up six hundred and twenty-four 6″ valve screws.
Fitted up twenty-four 10″ valve screws.
Fitted up one 16″ Ludlow valve screw.
Fitted up two 20″ Chapman valve screws.
Fitted up one hundred and forty 2″ Department valve seats.
Fitted up one hundred and twenty-one 3″ Department valve seats.
Fitted up two hundred and fifty 4″ Department valve seats.
Fitted up one thousand three hundred and fifty-six 6″ valve seats.
Fitted up forty-two 10″ valve seats.
Fitted up twelve double streamer valve seats.
Fitted up one hundred 6″ tapping valve seats.
Fitted up two hundred and seventy-five single streamer valve seats.
Fitted up one hundred and seventy-five streamer drip valve seats.
Fitted up three bubble spigots.
Fitted up twelve fountain spigots.
Fitted up one hundred and two single streamer drip rod springs.
Fitted up one hundred and sixty-three single streamer hydrant springs.
Fitted up fifty 1½″ meter spuds.
Fitted up one hundred and ninety-one standpipes.
Fitted up eleven 3″ meter strainers.
Fitted up nine fountain straps.
Fitted up twenty-one 10″ Department valves.
Fitted up six hundred and thirty-three 6″ Department valves.
Fitted up eighty-six 4″ Department valves.
Fitted up sixty-seven 3″ Department valves.
Fitted up thirty-six 2″ Department valves.
Fitted up fifty-six 6″ tapping valves.
Fitted up fifty-seven 5″ plug cover tops.
Fitted up sixty 4″ plug cover tops.
Fitted up two hundred and eighteen single streamer tail pipes.
Fitted up twenty-five single streamer drip valves.
Fitted up thirty-eight double streamer wrenches.
Fitted up fifty single streamer wrenches.
Fitted up eight ⅞″x3⅝″ brass tapping clamp bolts.
Repaired thirty-eight department automobiles.
Repaired one motorcycle (City Engineer's Department).
Altered six 12″ tapping valves.
Made two axes.
Tapped two 4″ caps to 1½″ hole (Construction Division).
Tapped one 6″ cap to 1″ hole (Construction Division).
Tapped one 8″ cap (Construction Division).
Tapped and threaded one 2″ hole in 48″ cap (Ensor st. and North ave.).
Tapped seventeen 1″ holes in 2″ cap (rear 1021 Beechwood ave. and Construction Division).
Tapped and bored one 2″ hole in 2″ cap.
Tapped two 3″ caps to 1″ hole (Construction Division).
Tapped and bored fifty 1½″ caps to ¾″ hole (Construction Division).
Tapped and drilled two hundred and eleven 1½″ caps to 1″ hole (Construction Division).

Tapped and drilled nine hundred and three 1½″ caps to ¾″ hole (Construction Division).
Tapped and drilled two hundred and sixty-two 1½″ caps to 1″ hole (Construction Division).
Moulded six hundred and seventeen lead meter seals.
Repaired four 8″x6″ clamps (Construction Division).
Repaired two 10″x4″ clamps (Construction Division).
Repaired one 16″x6″ clamp (Construction Division).
Made four 20″ female clamps (Construction Division).
Repaired one 20″x6″ tapping clamp (Construction Division).
Repaired twenty-four fountains.
Repaired one street washer (Construction Division).
Repaired five 4″ fire hydrants (Construction Division).
Repaired fourteen 5″ fire hydrants (Construction Division).
Repaired one hundred and eighty-three 6″ fire hydrants (Construction Division).
Repaired ninety-one 8″ fire hydrants (Construction Division).
Repaired one Ludlow hydrant (Construction Division).
Repaired two feed pumps.
Repaired one pump (Loch Raven).
Special repairs to No. 10 Pump (Mt. Royal Pumping Station).
Repaired nine market plugs.
Repaired one 5″ plug (Construction Division).
Repaired one 3″ valve plug (Lafayette ave., north of Druid Hill ave.).
Repaired two 8″ valve glands (Western Pumping Station).
Repaired one 3″ Crown meter.
Repaired one ¾″ Empire meter.
Repaired three 3″ Gem meters.
Repaired three 4″ Gem meters.
Repaired one ¾″ Hersey meter.
Repaired five 1½″ Hersey meters.
Repaired three 2″ Hersey meters.
Repaired one 3″ Hersey meter.
Repaired one ⅝″ Keystone meter.
Repaired seven ¾″ Keystone meters.
Repaired one hundred and one ⅝″ King meters.
Repaired forty-one ¾″ King meters.
Repaired six 1″ King meters.
Repaired one 1½″ King meter.
Repaired one 2″ King meter.
Repaired forty-three ⅝″ M. F. meters.
Repaired three ¾″ M. F. meters.
Repaired seven 1″ M. F. meters.
Repaired one 2″ Torrent meter.
Repaired thirteen 3″ Torrent meters.
Repaired eight 4″ Torrent meters.
Repaired three 6″ Torrent meters.
Repaired four 1½″ Trident meters.
Repaired two 2″ Trident meters.
Repaired one hundred and one ¾″ Union meters.
Repaired thirty-two 1″ Union meters.
Repaired thirty-one 1½″ Union meters.

Repaired one 1″ Worthington meter.
Repaired one 2″ Worthington meter.
Repaired one 1½″ Worthington meter.
Repaired two 3″ Worthington meters.
Repaired three 4″ Union meters.
Repaired forty 2″ Union meters.
Repaired eleven 3″ Union meters.
Repaired five oil pumps.
Repaired two ram pumps (Eastern Pumping Station).
Repaired vacuum pump (Western Pumping Station).
Made one guard for valve stem.
Made one valve stem.
Repaired two 4″ plug stems.
Made one 5″ plug stem.
Repaired one 16″ valve screw.
Sharpened and ground four thousand nine hundred and ninety-one tools.
Repaired valves (Mt. Royal Pumping Station).
Repaired one valve.
Repaired thirty 4″ valves.
Repaired thirty-one 6″ Department valves.
Repaired four 10″ valves.
Repaired one 16″ valve.
Repaired eleven 20″ valves.
Repaired two 30″ valves.
Repaired one 36″ Ludlow valve.
Repaired one 30″ Chapman valve.
Repaired nineteen 2″ Department valves.
Repaired twenty 3″ Department valves.
Repaired one 10″ A. P. Smith valve (Dolphin st. and Tiffany alley).
Repaired five 6″ tapping valves.
Repaired one 3″ Pratt & Cady valve.
Repaired one 48″ Pratt & Cady valve.
Repaired one 36″ by-pass Ludlow valve.
Made four lead cylinders (Engineering Division).
Made one 2″x3″ lead cylinder (Municipal Laboratory).
Set up one 36″ cutting machine.
Made four jacks.
Tapped one 6″ pipe, 1″ corporation cock.
Reamed one corporation cock (Construction Division).
Repaired three tapping machines (Construction Division).
Repaired three locks.
Repaired one electric lamp.
Repaired one jig.
Repaired two governors.
Repaired two chain falls.
Repaired Engine No. 839.
Repaired pump cylinders.
Repaired coal crusher.
Repaired coal conveyer (Mt. Royal Pumping Station).
Repaired hose connection.
Repaired air compressor (Eastern Pumping Station).
Drilled liners for furnace doors (Eastern Pumping Station).
Drilled one flange (Mt. Royal Pumping Station).
Drilled three grate bar frames.

Drilled one hundred and eighty-eight conveyer wheels (Mt. Royal Pumping Station).
Made one bolt (Loch Raven).
Made one mandle.
Made four wrenches.
Made eight bolts and rings.
Made seven links.
Made one ring.
Made thirty-one 1¼″ bolts (Loch Raven).
Bored and bushed three 18″ pulleys (G. O. E. Division).
Tapped five 4″ plug rods.
Tapped one 5″ plug rod (Construction Division).
Repaired Boiler No. 4.
Alterations to front for new stokers.
Repaired twelve wrenches.
Repaired boiler plates and hose.
Repaired electric wiring.
Repaired three shafts.
Repaired one spigot.
Repaired three scrapers.
Repaired two bonnet reamers.
Repaired one lathe rack.
Repaired lubricator and heater plates.
Repaired two end mills for valve seats.
Made one end mill for chasing seats.
Made three cube molds.

CARPENTER SHOP.

Made eight hundred hubs (G. O. E. Division).
Made nine thousand two hundred stakes (G. O. E. Division).
Made one hundred and forty-four 5′ wood stop boxes (Construction Division).
Made eleven 2′ wood stop boxes (stock).
Made two thousand and seventy-five 3′ wood stop boxes (stock).
Made twenty-four 6″ pipe plugs (stock).
Made eighty-eight 3″ pipe plugs (stock).
Made ninety-two 4″ pipe plugs (stock).
Made thirty 4′ wood stop boxes (stock).
Made one 16′ pole for coal cart.
Made twelve concrete watering troughs.
Made one hundred 2″ ferrule poles (Construction Division).
Made five tool boxes (Construction Division).
Made three vice boards (Construction Division).
Repaired coal bins (Eastern Pumping Station).
Repaired one step ladder (Mt. Royal Pumping Station).
Repaired nine tool boxes (Construction Division).
Repaired one hundred and fifty-nine tools (Construction Division).
Repaired doors (Old City Hall).
Repaired doors and window frames (Mechanical Division).
Repaired watering trough frames (Mechanical Division).
Sharpened thirty-two saws (Construction Division).
Erected platform for coal sampling (Mt. Royal Pumping Station).
Made watch box (Gunpowder Supply Improvement Division).
Miscellaneous covered gate, stand and railings.

PATTERN SHOP.

Cut one gasket.
Completed hypochlorite plant (Montebello).
Altered pump driver (hypochlorite plant, Montebello).
Altered one desk drawer (Engineering Division).
Fitted up three stadia rods (G. O. E. Division).
Furnished two gear pinions (hypochlorite plant, Montebello).
Miscellaneous carpentering for Water Engineer's office.
Repaired porch (Loch Raven).
Repaired flooring, shutters and pump (Guilford Reservoir).
Repaired bottom on drawing board (Hirshberg Art Company).
Made case for "U" tubes.
Repaired drawing board.
Made one form (Gunpowder Supply Improvement Division).
Repaired one hundred and twelve patterns.
Repaired window frames (Construction Division).
Made ventilation pipes in windows (Auditor's office, W. D.).
Repaired one fountain (Construction Division).
Made one lubricator pattern.
Made twenty-nine patterns.
Made one pattern (Western Pumping Station).
Made four portable watch boxes.
Made four drawers.
Made three 48″ gaskets (Loch Raven).
Made four 24″ gaskets (Loch Raven).
Made fifty-seven rammer handles (Construction Division).
Made one thousand one hundred and fifty hubs (G. O. E. Division).
Made two wooden mauls.
Made twelve stop planks (Loch Raven).
Made one hundred and seventy-four ferrule poles.
Made one pattern for vacuum pump.
Made four trestles.
Made one white pine cord box.
Made two core boxes (charged to Kugler & Shane).
Made one thousand one hundred ¾″ ferrule plugs.
Made three hundred and sixteen pine plugs.

BLACKSMITH SHOP.

Repaired one carriage (Construction Division).
Repaired horse hames (stable, Gay Street Yard).
Repaired five chains for harness (County Division).
Repaired one coal cart (Eastern Pumping Station).
Repaired one wheelbarrow (Eastern Pumping Station).
Repaired five drip rods (general stores).
Repaired and sharpened twenty-eight lamp stands (Construction Division).
Made twelve 12″ hose clamps (Construction Division).
Made one hundred 4″ ferrule clamps (Construction Division).
Made ten 10″ female clamps (Construction Division).
Made ten 12″ female clamps (Construction Division).
Made seven ¾″x27″ bolts (Loch Raven).
Made twelve ¾″x2″ iron rings (Eastern Pumping Station).
Pieced four ⅝″ bolts (Construction Division).

Forged four pump rods (Eastern Pumping Station).
Forged four collars (Eastern Pumping Station).
Forged one hundred and twenty-four header plate bolts (Eastern Pumping Station).
Forged seventy-eight manhole plate bolts (Eastern and Western Pumping Stations).
Forged four ⅞″x26″ bolts (Mt. Royal Pumping Station).
Forged on crank handle (Mt. Royal Pumping Station).
Forged five brackets (Mt. Royal Pumping Station).
Forged eighteen eye bolts (Mt. Royal Pumping Station).
Forged two trace clamps (stable, Gay Street Yard).
Forged twenty-two open links (stable, Gay Street Yard).
Forged two iron skids for auto truck (Construction Division).
Dressed and sharpened thirteen thousand six hundred and seventy-six tools (Construction Division).
Cut eight pieces ¾″ iron, 18″ long (Construction Division).
Put on one hundred new horseshoes (County Division).
Replaced forty old horseshoes (County Division).
Put on one thousand two hundred and six old horseshoes (Construction Division).
Replaced five hundred and ninety-six old horseshoes (Construction Division).
Put on seventy-one old horseshoes (Mechanical Division).
Replaced sixty old horseshoes (Mechanical Division).

The number of valves and hydrants manufactured this year, the pipe and fittings handled and special work done has been far in excess of that in previous years. Considerable of this was due to improved paving and new sewers. Quite an additional amount of work has been placed on this Division in the repairing, overhauling and painting of automobiles, not only for the Water Department, but for the various departments of the city government, and with very satisfactory results. Our facilities for this, however, are not very good and I would respectfully suggest that a fireproof building, possibly with iron framework and corrugated sides, be provided, where the machines can be dismantled and repaired, and with a dust-proof section therein, to be used as a paint shop.

Western Pumping Station.

The station has been in operation for the full twelve months. Pumps Nos. 46 and 90 were overhauled, but you will understand that no radical work was done on account of jeopardizing the Upper Services. In order to better the conditions, so that a pump might be taken out of service and yet neither the Western Upper Service nor the Eastern Upper Service sacrificed, a 6-inch by-pass, hand controlled and provided with pressure gauges, was installed between the Western Upper Service and the Eastern Upper Service discharge mains outside the respective check valves. This by-pass served its purpose well and has proven to be a good investment. It was installed on July 1, 1913.

During the year considerable trouble was experienced, and fast becoming serious, with the discharge mains outside the station, due to movement of fittings and valves and constant leakage. Conditions became so bad that on October 31 work was started on the renewal and replacement of the entire work. All the work was done between the hours of shutting down at night and starting up in the morning, using one pump for both services with the 6-inch by-pass as the supply to the Roland Standpipe. The entire work was done without stopping the service, either to the West Arlington or the Roland Standpipes, and I cannot but help expressing my appreciation for the co-operation of the Construction Division to this end. While the station was not out of service at any time, yet for a period of five hours (from 10 A. M. to 3 P. M.) on March 28 we could not pump to West Arlington Standpipe, due to trouble experienced by the Construction Division while making some repairs at Park Heights avenue and Third street.

The steam ends of both pumps are in good condition, except for minor repairs to valve gears, etc. The water ends show about the same as they did a year ago. The three National water-tube boilers are in good condition and have given good service. The Atlas boiler has not been used, there having been no occasion therefor. Most of the auxiliary equipment has been overhauled and has given good service.

Eastern Pumping Station.

This station has been in operation the entire year, with the exception of approximately eight hours, when it was shut down to renew the worst of the blowing steam joints. The main steam piping has been a source of annoyance for the entire year. Plans are being prepared for a new steam header in the boiler-room. Considerable work has been done on Pumps Nos. 839 and 1207. This was done, however, without shutting down the plant and without dismantling a pump to such an extent that it could not have been gotten back into service within eight or nine hours in case of an emergency. At the beginning of the year the slip, which had gradually increased, had reached the approximate figure of about 30 per cent. for Pump No. 1207 and 25 per cent. for Pump No. 839.

About 75 per cent. of the valve seats in Pump No. 1207 have been replaced with Boyd turbine valve seats and the slip has been reduced from 30 per cent. to approximately 5 per cent. The new valve seats and valves show up well after six months' wear. The sixteen steam and exhaust valve stems were repaired. The primary water heater was retubed and housing studs were made and placed. Repairs were started on the reheaters on Pump No. 1207, but not completed, as the pump had to be put back into service.

All valve seats in the water end of Pump No. 839 were replaced by the valve seats taken from Pump No. 1207, after said seats were faced off and put into good condition. The percentage of slip has been decreased from 25 per cent. down to 8 per cent. The condenser was overhauled and many of the tubes renewed.

New joints were made on the reheaters and the exhaust pipe to overcome leaks which were destroying the vacuum.

Considerable old and dead pipe has been removed from the basement of the Pumping Station. Considerable work has been done towards new exhaust lines and the connecting up of the Cochran feed-water heater. There remains, however, considerable work to be done.

The superheating and bottom row of tubes in Boiler No. 2 were renewed and a new header, superheating tubes and bottom tubes were renewed in Boiler No. 1. Boiler No. 4 was retubed and was provided with a Steinman underfeed stoker for test and approval, but did not prove satisfactory. This stoker, however, is being rebuilt at the present writing at the expense of the contractor. One very good feature, however, in connection with it is the shaking grate, and I would advise the adoption of the shaking grates for the other boilers in the station and also No. 4, should the stoker not prove satisfactory. A cracked header in Boiler No. 3 was replaced. In this boiler, for the same reason, a new front saddle header was installed.

A Dean duplex outside-packed plunger boiler feed pump was purchased and installed and has given good service.

Mount Royal Pumping Station.

The most notable thing at this station during the year was the starting up of the new B. & W. boilers and Pumping Engine No. 10. This work was installed under the supervision of the Assistant Water Engineer and all tests made were conducted by his force. The pump has been running for some time, but not up to full speed, due to construction work exterior to the station.

A break occurred in one of the "Y" branches on pump discharge header in the pipe vault. An endeavor was made to provide a temporary repair while making preparation to install a new fitting, but this was not successful. Fortunately, however, a "Y" fitting previously removed and intended for scrap had been held at the yard for emergency purposes, which, when checked, was found suitable. This fitting was used to replace the one broken. Water stored in the reservoirs, with that delivered from the Eastern Pumping Station, took care of the consumption during the period of making repairs.

Equipment at this station overhauled during the year was as follows:

Conveyer engine drive, new gears, etc.

Coal crusher, renewal of crushing rolls and repaired hopper.

Coal-conveyer, overhauled and curves reset.

Coal bunkers, new 6-inch tie beams placed.

Reheater Engine No. 1208, retubed.

Stoker engine, overhauled and gears renewed.

Coal scales, repaired track and platform.

Dynamo Engine No. 2, overhauled. In this connection would say that one end of crank pin was found loose. The shaft was taken to the shop and repaired. I am afraid, however, that a new crank shaft will have to be provided, as there is evidence that the crank pin is again coming loose.

A large part of the electric wiring has been renewed, as the insulation thereon had broken down and was a constant source of trouble, due to grounds and short circuits. In the boiler and conveyer rooms considerable of the wiring was renewed and locations changed on account of the rearrangement of the old boilers and the installation of the new ones.

The gas pipes in the station, which at the time of construction of the building were placed in the floors, were found to have developed leaks, and it was deemed advisable to renew most of them. The new pipes are exposed, so that in the future should leaks occur they can be readily located and repaired.

With the rearrangement of the old boilers and the installation of the new boilers, a new steam main was installed under contract, and after the same was in operation the old steam mains and their parts were removed and taken to Gay Street Yard and are there held subject to your disposal.

A water motor and fan, which had long been at Gay Street Yard, was connected up for providing purer air in the crusher room. This crusher room, by the way, you will understand is nothing more than a deep pit under the coal-unloading tower. In the summer time, with the heat radiated from the crusher engine cylinders and the coal dust and no air circulation, it is very hard on the men while unloading coal. This water motor is only in operation at such times when coal is being unloaded.

The hydraulic valve operator made by the Hydraulic Valve Operating Company was installed on the suction valve of Pump No. 1209, and for purpose of trying out a temporary connection for the supply and waste therefrom was provided.

In the sub-basement adjacent to the new pump two radiators have been installed.

Due to considerable trouble having been experienced with the air compressor of Pumps Nos. 1208 and 1209, and the same being inefficient, a Westinghouse air compressor was installed, as was also an air line to the new pumping engine.

The old Holly pipe lines, which were abandoned at the time of installing the new steam main, were also removed.

The boiler blow-off line outside of the building, and between it and the discharge well to sewer, had become a constant source of annoyance by reason of leaks which caused constant settlement of the pavement. This blow-off line has been taken out and renewed.

The furnace brick work in the new B. & W. boilers, which are equipped with Taylor stokers, has been renewed. This was caused mainly by the excessive clinkering of our coal.

The new coal stack scales, provided with new boiler installation, were erected.

New stacks on the old scales have also been placed.

A new ash chute has been placed under Boiler No. 6, as has also a new ash chute under the arch leading from the tower ash bin.

A new steam connection from the new steam main to the stoker engine of Boiler No. 8 has been installed.

A drip line for a part of the new steam header was found necessary, and has been provided.

A platform on top of the new boiler flue was found necessary. It has been placed to provide ready access to engine operating the scrapers of the Green economizer.

The Burt oil filter has been erected and put into use.

The wash bowls in the engineers' toilet and oilers' toilet have been renewed. Not only were the old marble slabs broken, but the bowls also, and each had been patched from time to time in past years.

On November 13, at approximately 5 A. M., an accident occurred to Pumping Engine No. 1208 by the breaking of a piston ring, a part of which dropped down into the exhaust port of the high pressure cylinder (east side) causing a part of the annular flange of the piston to be broken off. A part of this also passed into the exhaust port and either one or both of the broken pieces became locked between the rotary valve and the port. This stalled the valve and with it the valve stem, preventing it from turning. Now, as the reach rod of the valve could not rotate the stem it pushed it to one side and bent it and the journal casting in which the stem rotates was broken. This journal casting, by the way, acts as a bonnet for the valve chamber and is provided with a stuffing box and two journals for the valve stem. In this connection, I might say that it is remarkable that no greater damage was done. As this pump was thus put out of service it has been practically dismantled for overhauling. All work in connection with the overhauling that it is possible for the Department to do, and for which it is equipped, has been started.

Gay Street Yard.

A No. 2 Landis bolt cutter for bolts and pipe has been installed and has given very good satisfaction. There has also been purchased for the tool room a set of 48-fluted hand reamers with square shank—these were found to be extremely necessary. An additional lead furnace has been installed to facilitate the assembly of valves and hydrants.

The employees of the various divisions have been faithful in the performance of their work. The changes made in the personnel, of which you are aware, have proven beneficial.

Very respectfully,

A. O. Babendrier,
Superintendent Mechanical Division.

REPORT OF COUNTY DIVISION

BALTIMORE, December 31, 1913.

MR. EZRA B. WHITMAN, *Water Engineer.*

DEAR SIR—The rainfall on the Jones Falls supply was 38.39 inches.

The water in Lake Roland was too muddy to use for 22 days and was below the dam 169 days; the maximum flow was +1.05 on March 27 and the minimum —5.80 on July 28; 79.88 tons of hyphochlorite of lime were used in purifying the water.

Realized from the sale of hay, wood, etc., $943.62.

The Jones Falls conduit continues in good order; 119.59 tons of alum were used at Harpers Waste Weir in clarifying the water.

The maximum water in Hampden Reservoir was +0.5 on July 22 and December 24, the minimum —10.4 on April 18. In May, when Lake Roland was shut off, complaint was made by the Melvale Distillery of slack supply. This lake was shut off from Druid Lake and filled with untreated water, and before Druid Lake was again connected it was treated with 700 pounds of hypochlorite in its dry state by scattering it from a boat.

The maximum water in Druid Lake was —0.3 on December 24 and the minimum —10.7 on April 19. The railing was damaged six times during the year by automobiles. In each case where the license number could be obtained, the repairs were made and bills rendered to the owners.

The rainfall on the Gunpowder supply was 36.76 inches.

The water in Loch Raven was too muddy to use for 72 days and was below the dam 287 days. This was largely due for the accommodation of the contractor who was constructing the new dam. The maximum flow was +2.8 on March 27 and the minimum —10.7 on May 22. Several of the farms purchased for the construction of the Gunpowder improvements have been leased at a nominal rental with the object of getting them set in grass. Ninety-four thousand eight hundred and forty-five young trees of the following varieties were purchased and set in the nursery: 4,000 tulips, 2,000 yellow locusts, 2,000 catalpa spesioses, 2,845 sugar maples, 64,000 white pines, 9,000 Norway spruces, 5,000 hemlocks, 4,000 shagbark hickories, 2,000 black cherries. Twenty-six thousand seven hundred and eighty-six trees were transplanted to high ground at the upper end of the loch (3,775 tulips, 3,857 locusts, 5,600 black walnuts, 3,931 oaks, 2,473 white ash, 2,013 catalpa spesioses, 3,596 sugar maples, 766 shagbark hickories and 775 black cherries). One thousand three hundred as follows were purchased and set in nursery for future street planting: 500 elms, 500 white ash, 300 Norway maples and 200 Oriental planes. Cost of forestry stock, $786.25; labor, $2,290.50. Cost of street stock, $223; labor, $281. Realized from rent, wood, etc., $2,425.34.

The maximum water in Lake Montebello was +1.1 on March 6 and the minimum —20.7 on August 5. The hypochlorite plant was put in operation early in January, 119.59 tons of hypochlorite and 1,135.62 tons of alum were used in treating the water. Realized from the sale of hay, bags, etc., $371.95.

On July 11, Major William L. Kenly, formerly Water Engineer and one of the oldest employees of the Department, died at his residence at this lake.

The maximum water in Lake Clifton was +0.3 on December 15 and the mimimum —18.5 on April 19.

The maximum water in Guilford Reservoir was +0.6 on May 19 and the minimum —5.35 on September 22. The riprapping on the south slope is badly out of line and should be repaired.

The maximum water in Western High Service Reservoir was +0.6 on August 2 and the minimum —6.9 on September 9. Several complaints have been made by the Park Department about slack supply at the Mansion House in Druid Hill Park. I recommend that a tap be made from the Upper Service for this supply.

The maximum water in Lake Ashburton was —0.4 on July 16 and the minimum —8.8 on December 13. This reservoir and the grounds adjacent to the keeper's house are still in an unfinished condition, nothing having been done to them during the year.

The buildings and grounds of the standpipes are in good order, except the trouble house at West Arlington, which needs painting.

Our Water Shed Inspector made 904 sanitary inspections during the year and 21 abatements of nuisances were secured.

There were 54 typhoid cases reported. The samples of water taken for analysis showed 40 to be bad, 4 good, 8 used Baltimore county water, 1 was not on the shed and 1 where the occupant refused to allow the Inspector to take a sample.

Respectfully submitted,

William Benthall,
Superintendent.

TABLE OF RAINFALL, IN INCHES—1913.

Months.	Jones Falls Supply.			Gunpowder Supply.					
	Lake Roland.	Hampden Reservoir.	Druid Lake.	Loch Raven.	Lake Montebello.	Lake Clifton.	W. H. Ser. Reservoir.	Guilford Reservoir.	Lake Ashburton.
January	2.77	2.97	2.93	2.44	2.74	2.83	2.95	2.84	2.88
February	1.80	1.77	1.66	1.88	1.70	1.70	1.71	0.89	1.44
March	4.34	4.37	4.11	4.49	3.20	3.43	4.24	3.19	4.11
April	5.14	5.48	5.40	4.98	5.30	5.15	5.44	5.24	4.99
May	3.07	3.24	3.23	3.14	2.90	2.68	3.23	2.96	2.88
June	1.55	1.23	1.30	0.54	1.32	1.28	1.27	1.33	1.35
July	3.72	4.43	3.75	3.62	3.89	2.81	4.09	4.24	3.51
August	3.35	5.59	5.70	3.67	4.97	4.95	5.64	5.59	5.48
September	2.35	2.09	1.93	1.21	1.27	1.45	2.01	1.66	2.56
October	3.32	4.69	4.36	4.80	4.60	4.03	4.52	4.38	3.86
November	1.95	2.19	2.06	2.64	1.95	2.06	2.12	1.91	1.95
December	2.24	2.60	2.49	2.17	2.48	2.65	2.55	2.45	2.16
Total	35.60	40.65	38.92	35.58	36.32	35.02	39.77	36.68	37.17

REPORT OF FILTRATION DIVISION

Mr. Ezra B. Whitman, *Water Engineer.*

Dear Sir—In compliance with your request, I take pleasure in submitting the following report for work done by the Filtration Division during the year 1913:

Contracts Let.

Plans and specifications were prepared and nine different contracts (Nos. 9, 11, 12, 13, 14, 18, 19, 20 and 21) for work in connection with the Montebello filters were awarded. A more detailed statement regarding each of these contracts is given below.

Contract No. 9—Railroad.

In order to secure an easy means of hauling sand and gravel for construction purposes, it was planned to have the United Railways Company build a spur track around the lake drive, which would connect their Harford Avenue Line with the filtration plant. An informal agreement was made with them to do the work on a percentage basis, but on submitting the matter to the Board of Awards for approval they decided that it would be necessary first to advertise and then award the contract for this work in the usual manner. Three bids were opened on February 26, 1913, on plans and specifications prepared by this Division. Malcolm W. Hill & Company of Baltimore were the lowest bidders, and the contract was awarded to them for $11,555. According to contract, the road was to have been completed by April 19, 1913, but owing to a number of causes for which the contractors were in no way to blame the road was not sufficiently completed for hauling sand and gravel until June 3, 1913.

Contract No. 11—Filters, Basins and Grading.

Plans and specifications were originally prepared for this contract, which contemplated the building and equipping of the filters and the various basins to be used in preparing the water for filtration. There were three bids opened on April 30; that of the Keystone State Construction Company of Philadelphia for $971,187.41 being the lowest. The New York Continental Jewell Filtration Company bid $982,563.05 and Oscar Daniels and Company of New York City bid $1,016,525.60. The lowest of these prices was so much higher than our estimate that it was decided to reject all bids. The contract was then sub-divided. The earth work, concrete and such portions of the construction as it became necessary to build in connection with the concrete were formed into a separate contract and readvertised as Contract 11. That the changed form proved attractive to contractors was shown by the ten bids which were opened on June 4; the lowest being that of Stewart-Jones Company and Claiborne, Johnston & Company of Baltimore for $396,895.65. The contract was awarded to them.

A comparison between the bid of Stewart-Jones Company and Claiborne, Johnston & Company and the lowest previous bid of the Keystone State Construction Company showed that on the portion of the work awarded under Contract 11, upon which an accurate comparison could be made, the city saved $179,385. Owing to the fact that in the rejected bids for filter equipment, Item 25 contained a number of distinct elements which were grouped together under one lump sum, it was not possible to determine the full saving. The Keystone State Construction Company bid $385,000 for this item, a portion of which was afterward awarded under Contracts 11, 12, 13 and 14. Considerable additional saving was made on the last three contracts, which were for sluice gates, valves and cast-iron pipes and specials, but the amounts are not known.

By mutual agreement among the contractors the Stewart-Jones Company relinquished all claims on Contract 11, and on October 7, 1913, Claiborne, Johnston & Company assumed entire charge of the work. Work on Contract 11 has progressed in a satisfactory manner, the contractors having earned, up to date, $834,474.24, or 21 per cent. of the entire contract price. This includes the most tedious work to be constructed under their contract.

About 80,000 cubic yards of earth have been excavated, mostly by means of a Marion Steam Shovel No. 3, although a portion of the earth was removed by wheel scrapers. Most of the excavated material has been placed directly in the embankment or in the dams, both of which are nearly completed. The steam shovel loaded into 3-yard dump cars, which were hauled by 18-ton locomotives over a narrow gauge track laid with 60-pound rails. Dam No. 2, which is planned for a spoil bank and possible emergency use, was built by dumping the material from a trestle, but it was not rolled or tamped.

The site of Dam No. 1 was carefully prepared by stripping of all unsuitable material. The excavation for the conduit and the toe wall was carried to solid rock. The earth used for the construction of the dam was composed largely of clay and when deposited in thin layers and rolled with a 12-ton steam roller made a very compact embankment, almost equal to clay puddle. Seams that were encountered in the rock foundation under the toe wall were filled with grout forced in under pressure. With the exception of the foundation for Dam No. 1, the only rock encountered was in making the excavation for the main drain.

The concrete work for the main drain is nearly completed. There was a daily average of 51 men employed on the work up to October, and during the months of October, November and December the daily average was 119 men.

The contractors are planning to erect a cableway to enable them to operate to better advantage when work is actively resumed in the spring.

Contract No. 12—Sluice Gates.

Four bids were opened on June 18 for furnishing sluice gates for the entire filtration plant. The Coffin Valve Company of Boston, Mass., was awarded the contract for $16,356. Most of the gates to be furnished under this contract have been made and over half of them have been delivered on the ground. Estimates have been paid amounting to $9,023, or 55.1 per cent. of the contract price.

Contract No. 13—Valves.

The contract for all valves to be used in the construction of the plant was awarded to the Columbian Iron Works of Chattanooga, Tenn., for $21,234.56. Eight bids were opened on June 18. Some of the valves under this contract have been manufactured and are being held at the works at Chattanooga, owing to the fact that we are not ready for them to be delivered on the work. Several of the large valve companies who were much interested in the first proposal for Contract 11 failed to bid on this contract.

Contract No. 14—Cast Iron Pipe and Specials.

Four bids were opened on June 18 for cast-iron pipe and specials. The Glamorgan Pipe and Foundry Company was awarded the contract for $44,594. Pipe and specials have been delivered on the ground in compliance with the terms of our contract to the value of $12,492, amounting to 28 per cent. of the contract price.

Contract No. 18—Drayage.

Two bids were received on July 16 for hauling sluice gates, valves and pipe from the Harford avenue siding of the Baltimore and Ohio Railroad to the filtration plant. Peddicord Sons' Transfer Company being the lowest bidders, the contract was awarded to them for $1.40 per ton. They have hauled all shipments to date.

Contract No. 19—Pumping Machinery.

On September 10 eight bids were received for furnishing and placing of the pumping machinery for operation of the filtration plant. The Southwark Foundry and Machine Company of Philadelphia being the lowest bidder, the contract was awarded to them for $22,809. A large part of this work was made necessary owing to the fact that the high dam at Loch Raven is not to be built at the present time.

Contract No. 20--Electric Power Equipment.

Bids were opened on September 10 for furnishing the motors, transformers, wiring and electrical equipment necessary for the operation of the pumps and various devices for use in the filtration plant. The Westinghouse Electric and Manufacturing Company of Pittsburgh, Pa., being the lowest of five bidders, the contract was awarded to them for $26,800.

Contract No. 21—Head House, Pumping Station and Conduit.

This contract was for the remaining concrete structures to be built in connection with the filtration plant. There were three bids for this work; that of the Elkan-Tufts Construction Company of Baltimore for $94,610.63 being the lowest, the contract was awarded to them. They have earned to date $22,603.20, or 23.9 per cent. of the contract price. The excavated material became harder as the depth below the surface increased, forming a most excellent foundation for the buildings. At the pumping station site rock was encountered at about the elevation where the shaft dropped below the floor level. As this work is more concentrated than that of the other contracts, and as a large portion of it extends above ground, the contractors will, in the event of a mild winter, be able to work most of the time. During the months of November and December an average of 46 men were employed each day on the work.

Contract No. 4—Filtered Water Reservoir.

This contract was awarded to C. W. Lane & Company of Atlanta, Ga., on November 20, 1912, and work was started within a few days after the award of the contract, but has progressed in such a dilatory manner that on the last day of the year, when the contract time expired, but 62.4 per cent. of the contract price had been earned; or, making an allowance for the omission of clay puddle, 66.3 per cent. The entire excavation on this contract, involving the removal of 55,000 yards of earth, was carried on by means of wheel scrapers. At no time were there more than ten scrapers employed at once, and a major portion of the time there were but seven or eight scrapers engaged on the work. The small number of scrapers was the cause of some delay in placing the concrete bottom. Under this contract no allowance was made for rock excavation and a considerable amount of disintegrated rock, which was too hard to plow, and solid rock was encountered in Reservoir No. 2 and had to be blasted.

On October 20 an accident happened to a portion of the roof already built by the collapse of 17 groined arches, which proved, on investigation, to be due to the premature placing of the earth embankment against the reservoir wall and on the top of the arches.

During the months of January, February and March a daily average of 20 men were employed on the work. During April, May and June the average was 56, and during July, August and September the daily average was 129.

The fact that the contractors have not completed their work on contract time is quite a serious handicap to us, as their plant occupies a portion of the ground needed for the construction of our Contract 11. Unless their work is pushed with unusual vigor in the spring, it will cause a serious delay in the completion of the plant.

Shop Inspection of Materials.

The city's interests have been safeguarded by having the reinforcing bars, sluice gates, valves and cast-iron pipe and specials inspected at the point of manufacture. The method of inspecting material before delivery on the ground has proven satisfactory, as it saves annoyance and trouble on the job.

Pumping Station.

The decision of the Water Board to postpone the construction of the high dam to some future date made necessary the construction and equipment of a pumping station, which was not contemplated in the original plans for the filtration plant. This work involved the construction of a much more expensive building and a much more elaborate equipment in every way than would have been the case had the station been built only for emergency.

Electric Power Equipment.

After investigating the best method of operating the filtration plant, taking into account both construction and operating costs, it was decided to equip the station electrically and buy the power from the Consolidated Gas Electric Light and Power Company, a tentative agreement having been drawn up with that company whereby power can be purchased for less than one cent per kilowatt hour.

Aerators.

Failure to build the high dam made it necessary to abandon the plan of aerating the water before filtration, on account of the prohibitive cost of pumping water the additional height necessary for operating the aerators. Provision, however, has been made for building the gate houses and equipping them with the necessary means of controlling the water should it be deemed advisable to add aerators at a future date.

Removal of Office.

On September 5, 1913, the entire office of the Filtration Division was moved from the Knickerbocker Building to Lake Montebello, where it is a present housed in the dwelling formerly occupied by the late William A. Kenly.

Employees' Residence.

On the property recently acquired for the purpose of constructing the filtration plant there were two houses. One of them, owned by Josephine Rappe, was, according to agreement, torn down and removed by the owner from the ground, with the exception of the foundation. The other, owned by Robert Brodie, was removed east of the coagulating basin, where it was set upon a new foundation with the expectation of using it as an employees' residence. The work of moving the house was done by Stewart-Jones and Claiborne, Johnston & Company, under their contract as extra work.

Future Contracts.

Two large contracts and several small ones are still to be awarded. One for the furnishing and placing of the filter equipment has been practically ready for advertising for some time, but owing to certain contemplated changes it will probably not be ready for a letting until February. Plans and specifications are well under way for a contract for the superstructures of buildings which, outside of Contract 11, will probably be the largest single contract to be awarded in connection with the filtration work. It will probably be ready for letting early in the spring.

Drawings.

During the past year the Filtration Division have made the following drawings:

Traced and recorded	138
Traced in an uncomplete condition	29
Drawn, but not traced	8
Recorded drawings, principally cross-sections, etc	95
Total	270

Engineering Force.

Owing to the number of contracts into which the work has been divided and to the fact that construction and designing work is being carried on simultaneously, it has necessitated a material increase in the engineering force. There are now 23 men on the pay roll, including engineers, draughtsmen, inspectors, etc.

Property.

During the year the following property has been acquired:

	Acres.
Thomas Brodie	3.16
Robert Brodie	8.09
Josephine Rappe	2.45

Negotiations are in progress for acquiring the small graveyard adjacent to the mixing basin, containing 0.271 acres, and also for the following properties:

	Acres.
Estate of Mrs. Mary Green	2.90
John Graham	3.00
Thomas Brodie	1.78

Park Board.

The Park Board have given their consent for the use of a tract of ground owned by them and located between the Water Board's property and the estate of Mrs. Mary Green. Upon this tract Dam No. 2 and certain roads are to be built. It is the purpose to build additional driveways and to beautify the grounds adjacent to the filtration plant in such a way as to make the place attractive as a park.

Consulting Engineers.

On several different occasions Mr. George W. Fuller of New York was consulted in reference to plans and specifications, and was engaged to advise us in connection with the patent situation. Mr. John W. Gregory was employed to report on the groined arch accident of October 20.

Experiments.

In order to determine whether or not it would be safe to omit the wire screen usually employed between the sand and gravel layers in filters using a high rate of wash, an experimental filter was built and placed in the Gay Street Yard. A series of tests seemed to prove that it was entirely safe to omit this wire screen when washing filters at rates between 2 and 5 vertical feet rise per minute. A section of the proposed strainer plate was also tested to destruction as nearly as possible under operating conditions to determine the load that it would carry.

Plan of Operation.

Those who are not familiar with the plans, and care to understand the process of handling the water, will be helped somewhat by referring to the general plan and the following description:

The existing 12-foot tunnel, which conveys the water from Loch Raven, will be the only source of supply. The tunnel passes under the center of the filtration plant and has its invert at elevation 143, which is 69 feet below the driveway that surrounds the station. The pumping station is circular in form and rising in its center is the intake shaft, 16 feet internal diameter, from which the centrifugal pumps take their suction. The pumps are supported upon a floor at elevation 193 and are arranged radially around the shaft. They discharge into the 6-foot concrete conduit that surrounds the station, both ends feeding an 8-foot conduit and Venturi meter, through which the water flows into the stilling chamber of the head house.

In the course of ordinary operation, water is admitted from the stilling chamber to the mixing basin and, as it enters, lime is added to it. The mixing basin is divided into narrow passages by baffles, which keep the water moving at a velocity sufficient to hold most of the lime in suspension and thoroughly incorporate it with the water. After the lime-treated water has passed around a few of the baffles, sulphate of iron is added. The lime and iron prepare the water for filtration by forming small flocs of coagulated matter, which contain most of the particles held in suspension, together with the chemicals added to the water.

In the coagulating basins, the water moves very slowly and most of the flocs are precipitated to the bottom, carrying with them most of the bacteria. The smaller flocs that do not settle out quickly are removed by the filters.

The chemicals are stored, mixed and controlled in the head house, and are applied to the water automatically in direct ratio to the amount flowing into the basins, as measured by the Venturi meter. After passing through the mixing basin, the water enters the intermediate conduit of the center passage and flows through it to the Coagulating Basin No. 1, where it is admitted through five 48-inch by 48-inch sluice gates, which are separated in such a way as to distribute the flow as uniformly as possible over the north half of the basin. After the water has passed around the baffle, it is skimmed over a wier and conveyed to the upper conduit of the center passage through five 54-inch by 54-inch sluice gates, whence it passes to the gallery conduits and then to the filters.

The coagulating basins are about 232 feet by 318 feet inside dimensions and it requires 1½ hours' time for water to pass through each, or 3 hours through both, when they are operated in series at the normal rate of 128,000,000 gallons per day. The coagulating basins can also be operated in parallel or used singly, as will be the case when one of the basins requires cleaning. There are 32 filter units built along two parallel galleries, eight being constructed on each side of each gallery. Each filter unit has a normal capacity of 4,000,000 gallons, a net sand area of 1,440 square feet and measure 55 feet 6 inches by 32 feet outside dimensions.

After filtration, the water passes through the piping under the filters into the intermediate conduits in the pipe galleries, through which it flows backward as far as the center passage, and as it turns to enter the basins under the filters hypochlorite of lime is added as a sterilizing agent. By admitting the water to the basins at the back, it is kept constantly in motion toward the outlet and all dead water pockets are avoided. There are three basins under the filters, having an aggregate capacity of about 2,500,000 gallons. It is possible to empty any or all of them for cleaning or repairs and still use all the filters. From the basins the water enters the filtered water reservoirs through a short section of 8-foot circular conduit. The twin reservoirs, each holding a little over 7½ million gallons, will ordinarily be used in parallel.

Water will flow directly into the city distribution system from the reservoirs, which are high enough to feed by gravity the intermediate and low level districts. As the consumption of water at different hours of the day varies considerably, and as the storage reservoir is small, it is planned to control the flow of water through the plant automatically and have it respond to the demands of the city for water. The filter controllers will be operated in such a way as to permit the water to enter the system at a maximum rate when the level in the filtered water reservoirs falls below a certain predetermined point, and as the water rises it will gradually slow down the filters until they will be completely shut down when the water reaches a fixed maximum level.

After a period of service the filters gradually become clogged. For the purpose of cleansing them, pure water is forced upward through the sand at a very high rate, about 2 cubic feet per minute per foot of sand area, which is the equivalent of 32 million gallons per day per filter, or about eight times the rate of ordinary filtration. Water at this rate will be applied only for a period of from 5 to 8 minutes. If the wash water was applied directly it would take a large pump, which would operate for a few minutes and then remain idle for a much longer period of time. As this is not desirable, small pumps run continuously, or nearly so, are used for filling two large concrete tanks from which the wash water is drawn.

After washing, the dirty water passes through concrete conduits to the settling reservoir, formed by constructing a dam across a ravine adjacent to the plant.

LIST OF EMPLOYEES OF FILTRATION DIVISION.

Name.	Title.	Date of Employment.
James W. Armstrong	Engineer Filtration Division	July 17, 1912.
Steuart Purcell	Asst. Division Engineer	July 16, 1912.
Arthur L. Reeder	Chief Draftsman	July 16, 1912.
I. Ellis Behrman	Resident Engineer	January 2, 1914.
H. A. Loser	Designing Engineer	October 23, 1912.
V. Bernard Siems	Asst. Engineer, Grade "A"	September 1, 1912.
Leon Small	Draftsman, Grade "A"	September 1, 1912.
Frank Fahm, Jr.	Asst. Engineer, Grade "B"	October 23, 1912.
E. H. Eardley	Draftsman, Grade "B"	July 29, 1912.
Ralph K. Linville	Asst. Engineer, Grade "B"	July 1, 1913.
Henry J. Horn	Inspector, Grade "B"	October 21, 1912.
I. Barton Kreis	Clerk and Stenographer	July 21, 1913.
Thomas B. McAllister	Inspector, Grade "D"	June 10, 1913.
Edwin J. Lake	Inspector, Grade "B"	September 4, 1913.
William F. Preston	Rodman	August 27, 1913.
Arthur F. Brownley	Rodman	September 9, 1913.
F. L. Brown	Rodman	September 11, 1913.
George W. Nighman	Inspector, Grade "D"	September 25, 1913.
Carroll D. Weatherly	Instrument Man	October 6, 1913.
Murray Roberts	Rodman	October 6, 1913.
Carlton D. Cann	Inspector, Grade "C"	November 18, 1913.
E. F. Lang	Messenger	September 3, 1913.
William C. Thomas	Watchman	September 27, 1913.
A. E. B. Jones	Inspector, Grade "A"	January 3, 1913.

TABULATION OF CONTRACTS AWARDED FOR WORK ON FILTRATION DIVISION TO DECEMBER 31, 1913

Contract No.	Contractors.	Address.	Work.	Contract Price.	Bids Opened.	Contract Awarded.	Date Notified.	Date of Contract.	Time of Completion.
4	C. W. Lane & Company	Atlanta, Ga.	Filtered water reservoir	$171,750 00	Nov. 6, 1912.	Nov. 20, 1912.	Nov. 30, 1912.	Nov. 22, 1912.	Jan. 1, 1914.
9	W. M. Hill & Company	Baltimore, Md.	Railroad	11,555 00	Feb. 26, 1913.	Mar. 5, 1913.	Mar. 5, 1913.	Mar. 13, 1913.	Apr. 19, 1913.
11	Claiborne-Johnston & Company	Baltimore, Md.	Filter basins and grading	396,895 65	June 4, 1913.	June 11, 1913.	June 23, 1913.	June 16, 1913.	Dec. 1, 1915.
12	Coffin Valve Company	Boston, Mass.	Sluice gates	16,356 00	June 18, 1913.	June 25, 1913.	June 28, 1913.	June 30, 1913.	Mar. 1, 1914.
13	Columbian Iron Works	Chattanooga, Tenn.	Valves	27,234 56	June 18, 1913.	July 2, 1913.	July 7, 1913.	July 12, 1913.	May 1, 1914.
14	Glamorgan Pipe and Foundry Company	Lynchburg, Va.	Cast-iron pipe and specials	44,594 00	June 18, 1913.	June 25, 1913.	June 25, 1913.	June 27, 1913.	Mar. 15, 1914.
18	Peddicord Sons' Transfer Company	Baltimore, Md.	Drayage	1,856 40	July 16, 1913.	July 23, 1913.	July 23, 1913.	July 25, 1913.	Jan. 1, 1915.
19	Southwark Foundry and Machinery Company	Philadelphia, Pa.	Pumping machinery	22,809 00	Sept. 10, 1913.	Sept. 17, 1913.	Sept. 17, 1913.	Sept. 23, 1913.	Apr. 1, 1915.
20	Westinghouse Electric Manufacturing Company	Pittsburgh, Pa.	Electric equipment	26,800 00	Sept. 10, 1913.	Sept. 17, 1913.	Sept. 17, 1913.	Sept. 25, 1913.	Apr. 1, 1915.
21	Elkan-Tufts Contracting Company	Baltimore, Md.	Head house, pumping station and conduit.	94,610 36	Aug. 27, 1913.	Sept. 3, 1913.	Oct. 1, 1913.	Sept. 6, 1913.	Dec. 1, 1915.

BALTIMORE CITY WATER DEPARTMENT—FILTRATION DIVISION.

Railroad Track and Appurtenances—Contract No. 9.

(Bids opened February 26, 1913.)

Malcolm W. Hill & Company, Baltimore, Md.	$11,555 00
Whiting-Turner Construction Company, Baltimore, Md.	12,549 00
C. W. Lane & Company, Atlanta, Ga.	18,943 00

BALTIMORE CITY WATER DEPARTMENT—FILTRATION DIVISION.

Tabulation of Bids for Filters, Basin and Grading Contract No. 11—April 30, 1913.

Item Number.	Description.	Quantity.	Keystone State Const. Co., 704-709 Penna. Bldg., Philadelphia, Pa.		New York Continental Jewell Filtration Co., 15 Broad St., New York, N. Y.		Oscar Daniels Co., Woolworth Building, New York, N. Y.	
			Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.
1	Clearing and grubbing	12 acres.	$100 00	$1,200 00	$90 00	$1,080 00	$100 00	$1,200 00
2	Earth excavation	107,000 cu. yds.	80	85,600 00	85	90,950 00	95	101,650 00
3	Rock excavation	700 cu. yds.	4 00	2,800 00	3 70	2,590 00	3 50	2,450 00
4	Earth embankment	69,200 cu. yds.	30	20,760 00	30	20,760 00	35	24,220 00
5	Rolled embankment	37,800 cu. yds.	50	18,900 00	50	18,900 00	45	17,010 00
6	Rubble paving	230 sq. yds.	2 00	460 00	1 90	437 00	1 75	402 50
7	Seeding	6 acres.	60 00	360 00	50 00	300 00	60 00	360 00
8	Concrete, Class "A"	254 cu. yds.	38 00	9,652 00	37 50	9,525 00	35 00	8,890 00
9	Concrete, Class "B"	3,690 cu. yds.	13 90	51,291 00	14 00	51,660 00	14 50	53,505 00
10	Concrete, Class "C"	5,339 cu. yds.	11 80	63,000 20	12 00	64,068 00	13 00	69,407 00
11	Concrete, Class "D"	15,576 cu. yds.	12 20	190,027 20	12 60	196,257 60	13 00	202,488 00
12	Special surfacing of concrete	3,883 sq. yds.	72	2,795 76	65	2,523 95	70	2,718 10
13	Steel reinforcement	1,839,250 lbs.	045	82,766 25	05	91,962 50	05	91,962 50
14	Miscellaneous steel	53,000 lbs.	10	5,300 00	09	4,770 00	10	5,300 00
15	Iron castings	35,500 lbs.	07	2,485 00	07	2,485 00	065	2,307 50
16	24″ terra-cotta drains	50 lin. ft.	2 00	100 00	2 10	105 00	2 50	125 00
17	10″ terra-cotta drains	290 lin. ft.	1 00	290 00	1 00	290 00	1 00	290 00
18	6″ terra-cotta drains	200 lin. ft.	1 00	200 00	1 00	200 00	90	180 00
19	4″ terra-cotta drains	200 lin. ft.	1 00	200 00	1 00	200 00	80	160 00
20	Wash water pumps	Lump sum.		8,000 00		8,800 00		7,800 00
21	Underwriters pump	Lump sum.		3,000 00		3,000 00		2,800 00
22	Sluice gates	Lump sum.		29,000 00		36,500 00		38,000 00
23	Wooden baffles	Lump sum.		3,000 00		2,900 00		3,500 00
24	Miscellaneous equipment	Lump sum.		5,000 00		4,600 00		4,800 00
25	Filter equipment	Lump sum.		385,000 00		367,699 00		375,000 00
	Totals			$971,187 41		$982,563 05		$1,016,525 60

BALTIMORE CITY WATER DEPARTMENT FILTRATION DIVISION

Tabulation of Bids for Filters, Basin and Grading Contract No. 11 June 1 191[illegible]

No.	Description	Quantity	Stewart Jones Co and Clifborne Johnston & Co., 901 Calvert Bldg Baltimore Md		Henry Smith & Sons Co., 111 Hanover St Baltimore Md		C W Lane & Co, Inc Atlanta, Ga., and Lane Bros Co Baltimore Md		Elkan-Tufts Const. Co., 702 E Lexington St, Baltimore Md		Albert H Prange 1250 Lake Drive Grand Rapids Mich		Hassan Paving Co., 390 Main St Worcester Mass		Nicola Building Co Pittsburgh Pa		Oscar Daniels Co Woolworth Bldg New York City		Keystone State Const Co., 701-709 Penna Bldg., Philadelphia Pa		Ryan & Reilly Union Trust Bldg Baltimore Md		Average of Bids	
			Unit Price	Total	Unit Price	Total	Unit Price	Total	Unit Price	Total	Unit Price	Total	Unit Price	Total	Unit Price	Total	Unit Price	Total	Unit Price	Total	Unit Price	Total	Unit Price	Total
1	Clearing and grubbing	12 acres	$200 00	$2 400 00	$150 00	$1 800 00	$300 00	$3,600 00	$75 00	$900 00	$100 00	$1 200 00	$100 00	$1 200 00	$96 00	$1 152 00	$90 00	$1 080 00	$100 00	$1 200 00	$100 00	$1 200 00	$131 10	$1,573 20
2	Earth excavation	110 000 cu. yds	38	41,800 00	29	31 900 00	70	77,000 00	53	58,300 00	47	51,700 00	50	55,000 00	41	45 100 00	66	72 600 00	70	77,000 00	72	79,200 00	[illegible]	58,960 00
3	Rock excavation	700 cu. yds	5 00	3,500 00	2 92	2,044 00	2 50	1,750 00	2 00	1,400 00	1 50	1,050 00	3 00	2,100 00	3 60	2,520 00	2 00	1 400 00	4 00	2,800 00	4 00	2,800 00	3 05	2 136 40
4	Earth embankment	69 200 cu. yds	21	14 532 00	17	11 764 00	20	13,840 00	15	10,380 00	30	20,760 00	30	20,760 00	39	26 988 00	20	13 840 00	20	13 840 00	36	24 912 00	[illegible]	17,161 60
5	Rolled embankment	37 800 cu. yds	35	13,230 00	32	12 096 00	30	11 340 00	23	8,694 00	30	11 340 00	50	18 900 00	48	18 144 00	25	9 450 00	40	15 120 00	45	17 010 00	[illegible]	13,532 40
6	Rubble paving	230 sq. yds	3 00	690 00	70	161 00	1 50	345 00	2 00	460 00	1 00	230 00	2 00	460 00	1 20	276 00	1 00	230 00	2 00	460 00	1 50	345 00	1 59	365 70
7	Seeding	6 acres	80 00	480 00	75 00	450 00	150 00	900 00	25 00	150 00	50 00	300 00	60 00	360 00	60 00	360 00	45 00	270 00	100 00	600 00	50 00	300 00	70 50	423 00
8	Concrete Class A	254 cu. yds	24 00	6,096 00	22 00	5,588 00	23 90	6,070 60	30 00	7,620 00	22 00	5,588 00	30 00	7,620 00	[illegible]	[illegible]	25 00	6 350 00	29 00	7 366 00	35 00	8,890 00	[illegible]	6 851 65
9	Concrete Class B	3,690 cu. yds	9 20	33,948 00	11 00	40 590 00	13 20	48,708 00	12 80	47,232 00	11 00	40,590 00	11 00	40,590 00	[illegible]	[illegible]	[illegible]	[illegible]	12 80	[illegible]	[illegible]	[illegible]	11 73	[illegible]
10	Concrete Class C	5,339 cu. yds	9 00	48 051 00	7 95	42,445 05	6 55	34,970 45	9 90	52,856 10	9 00	48 051 00	8 25	44,046 75	[illegible]	[illegible]	[illegible]	[illegible]	10 50	[illegible]	10 50	[illegible]	9 01	48 264 56
11	Concrete Class D	15,576 cu. yds	9 70	151 087 20	10 95	170,557 20	9 00	140 184 00	10 00	155,760 00	10 00	155 760 00	11 00	171,336 00	[illegible]	[illegible]	[illegible]	[illegible]	11 10	[illegible]	[illegible]	[illegible]	10 84	[illegible]
12	[illegible]	3,883 sq. yds	35	1 359 05	35	1,359 05	45	1 747 35	30	1,164 90	40	1 553 20	40	1 553 20	[illegible]	[illegible]	30	1 164 90	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	Steel reinforcement	1,856,000 lbs	[illegible]	60 320 00	[illegible]	64,774 40	03	55,680 00	[illegible]	[illegible]	04	74 240 00	03	55,680 00	[illegible]	[illegible]	[illegible]	[illegible]	04	74 240 00	[illegible]	[illegible]	[illegible]	[illegible]
14	Miscellaneous steel	53,000 lbs	05	2,650 00	10	5,300 00	[illegible]	[illegible]	05½	2,915 00	04	2,120 00	05	2,650 00	[illegible]	[illegible]	[illegible]	[illegible]	10	5 300 00	08	4 240 00	07	3,749 75
15	Iron castings	35,500 lbs	06	2 130 00	07	2 485 00	04¾	1 686 25	04½	1,597 50	04	1,420 00	05	1,775 00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	06	[illegible]	[illegible]	[illegible]
16	24" terra cotta drains	50 lin. ft	2 50	125 00	2 50	125 00	2 20	110 00	2 00	100 00	1 50	75 00	2 00	100 00	[illegible]	160 00	2 50	125 00	2 00	100 00	2 00	100 00	2 24	112 00
17	10" terra cotta drains	290 lin. ft	96	278 40	80	232 00	65	188 50	1 50	435 00	75	217 50	1 00	290 00	[illegible]	[illegible]	90	261 00	1 00	290 00	60	174 00	[illegible]	272 89
18	6" terra cotta drains	200 lin. ft	72	144 00	35	70 00	40	80 00	1 00	200 00	50	100 00	50	100 00	1 00	200 00	55	110 00	1 00	200 00	45	90 00	66	132 40
19	4" terra cotta drains	200 lin. ft	60	120 00	30	60 00	30	60 00	80	160 00	40	80 00	50	100 00	90	180 00	50	100 00	1 00	200 00	40	80 00	57	114 00
20	[illegible]	Lump sum		1 680 00		2,449 00		3,175 00		2 500 00		3,000 00		3,000 00		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]
21	[illegible]	Lump sum		480 00		200 00		312 00		270 00		300 00		250 00		[illegible]		[illegible]		[illegible]		[illegible]		295 10
22	Fence	Lump sum		440 00		100 00		150 00		175 00		200 00		[illegible]		[illegible]		100 00		[illegible]		160 00		224 50
23	[illegible]	Lump sum		[illegible]		1,500 00		1,680 00		1,500 00		1,500 00		1,800 00		[illegible]		[illegible]		[illegible]		1 500 00		[illegible]
24	[illegible]	Lump sum		1,008 00		700 00		708 00		865 00		600 00		850 00		[illegible]		[illegible]		[illegible]		[illegible]		882 10
25	[illegible]	Lump sum		[illegible]		425 00		751 50		[illegible]		500 00		750 00		[illegible]		[illegible]		[illegible]		500 00		549 25
26	Setting [illegible]	200 tons	12 00	2 400 00	20 00	4 000 00	30 00	6,000 00	15 00	3,000 00	10 00	2,000 00	25 00	5,000 00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4,030 00
27	Small piping	Lump sum		2 400 00		680 00		2,260 00		325 00		400 00		800 00		[illegible]		[illegible]		[illegible]		[illegible]		1 303 00
28	Setting [illegible]	5 each	100 00	500 00	50 00	250 00	100 00	500 00	64 00	320 00	60 00	300 00	50 00	[illegible]	[illegible]	1 080 00	[illegible]	[illegible]	[illegible]	[illegible]	100 00	500 00	112 50	562 50
29	Setting [illegible]	3 each	102 00	306 00	40 00	120 00	[illegible]	[illegible]	61 00	183 00	55 00	165 00	[illegible]	150 00	180 00	540 00	[illegible]	[illegible]	[illegible]	[illegible]	100 00	300 00	103 80	311 40
30	Setting [illegible]	2 each	82 00	164 00	30 00	60 00	60 00	120 00	49 00	98 00	50 00	100 00	50 00	100 00	150 00	300 00	[illegible]	[illegible]	[illegible]	[illegible]	100 00	200 00	88 60	177 20
31	Setting [illegible]	10 each	77 00	770 00	25 00	250 00	55 00	550 00	44 00	440 00	45 00	450 00	40 00	400 00	[illegible]	1 210 00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	787 00
32	Setting 18" x 18" [illegible]	10 each	62 00	620 00	20 00	200 00	50 00	500 00	24 00	240 00	10 00	100 00	35 00	350 00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	66 70	667 00
33	Setting [illegible]	4 each	57 00	228 00	18 00	72 00	45 00	180 00	18 00	72 00	35 00	140 00	30 00	120 00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	55 00	220 00
34	Setting [illegible]	4 each	47 00	188 00	15 00	60 00	40 00	160 00	15 00	60 00	30 00	120 00	25 00	100 00	[illegible]	180 00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	180 80
35	Setting [illegible]	5 each	27 00	135 00	13 50	67 50	35 00	175 00	14 00	70 00	25 00	125 00	20 00	100 00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	161 25
36	Setting 18" [illegible]	8 each	22 00	176 00	10 00	80 00	30 00	240 00	7 00	56 00	20 00	160 00	10 00	80 00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	175 68
	Total			[illegible]		$405,014 20		$419 391 65		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]

BALTIMORE CITY WATER DEPARTMENT FILTRATION DIVISION

Tabulation of Bids for Sluice Gates Contract No. 12 June 18, 1913

Item	Description	Number	Coffin Valve Company, Neponset, Boston, Mass.			Coldwell-Wilcox Company, Newburgh, N. Y.			S. Morgan Smith Company, York, Pa.			Roe Stevens Mfg. Company, Detroit, Mich. As Intended			Roe Stevens Mfg. Company, Detroit, Mich. As Submitted		
			Weight of Gate	Unit	Total	Weight of Gate	Unit	Total	Weight of Gate	Unit	Total	Weight of Gate	Unit	Total	Weight of Gate	Unit	Total
1	84 inch by 84 inch gate	1	11,400	$890 00	$890 00	6,700	$767 00	$767 00	9,400	$1,060 00	$1,060 00	11,000		$795 00	11,000	$795 00	$795 00
2	72 inch by 72 inch gate	6	8,300	443 00	2,658 00	5,000	546 00	3,276 00	[illegible]	625 00	3,750 00	[illegible]		3,140 00	7,200	3,140 00	18,840 00
3	60 inch by 72 inch gate	7	7,800	438 00	3,066 00	4,500	[illegible]	[illegible]	6,000	600 00	4,200 00	6,000		3,220 00	6,000	3,220 00	22,540 00
4	60 inch by 60 inch gate	2	5,500	385 00	770 00	4,350	505 00	1,010 00	3,900	500 00	1,000 00	5,500		896 00	5,500	896 00	1,792 00
5	54 inch by 54 inch gate	10	4,400	285 00	2,850 00	2,800	410 00	4,100 00	3,200	130 00	1,300 00	4,500		3,890 00	4,500	1,890 00	18,900 00
6	48 inch by 48 inch gate	10	4,200	275 00	2,750 00	2,400	301 00	3,010 00	[illegible]	380 00	3,800 00	3,700		3,080 00	3,700	3,080 00	30,800 00
7	36 inch by 48 inch gate	4	3,000	224 00	896 00	1,800	271 00	1,084 00	[illegible]	344 00	1,376 00	3,000		1,304 00	3,000	1,304 00	5,216 00
8	30 inch by 36 inch gate	4	2,200	175 00	700 00	1,600	195 00	780 00	1,500	[illegible]	[illegible]	1,500		910 00	1,500	910 00	3,640 00
9	24 inch by 24 inch gate	5	1,500	118 00	590 00	1,250	158 00	790 00	1,150	225 00	1,125 00	800		665 00	800	665 00	3,325 00
10	18 inch circular gate	8	4,200	67 00	536 00	2,200	71 50	572 00	6,700	206 00	1,648 00	5,500		532 00	5,500	532 00	4,256 00
11	60 inch circular gate	1	1,000	650 00	650 00	[illegible]	517 00	517 00	850	950 00	950 00	140		580 00	140	580 00	580 00
	Totals				$16,356 00			$19,151 00			$[illegible] 00			$19,012 00			$110,684 00

BALTIMORE CITY WATER DEPARTMENT FILTRATION DIVISION

Tabulation of Bids for Valves Contract No. 13 June 18, 1913

Item	Size	Description	Number	Columbian Iron Works, Chattanooga, Tenn.			Eddy Valve Company, Waterford, N. Y.			Darling Pump and Manufacturing Company, Limited, Williamsport, Pa.			Coffin Valve Company, Neponset, Boston, Mass.			The Pratt and Cady Company, Hartford, Conn.			The Kennedy Valve Manufacturing Company, Elmira, N. Y.			Crane Company, 606 West Pratt Street, Baltimore, Md.			Roe Stephens Mfg. Company, Detroit, Mich. As Intended			Roe Stephens Mfg. Company, Detroit, Mich. As Submitted		
				Weight of Valve	Unit	Total	Weight of Valve	Unit	Total	Weight of Valve	Unit	Total	Weight of Valve	Unit	Total	Weight of Valve	Unit	Total	Weight of Valve	Unit	Total	Weight of Valve	Unit	Total	Weight of Valve	Unit	Total	Weight of Valve	Unit	Total
1	36"	Hydraulic	2	1,800	$401 98	$803 96	6,100	$425 00	$850 00	5,776	$455 00	$910 00	1,900	$600 00	$1,200 00	6,450	$450 00	$900 00	8,400	$590 00	$1,180 00		$571 80	$1,143 60	1,750		$691 00	[illegible]	$691 00	$1,382 00
2	36"	Geared O. S. and Y.	4	2,850	238 25	953 00	5,000	300 00	1,200 00	5,100	390 60	1,562 40	4,100	325 00	1,300 00	5,900	315 00	1,260 00	5,000	340 00	1,360 00		389 80	1,559 20	[illegible]		1,398 00	[illegible]	1,398 00	[illegible]
3	30"	Hydraulic	33	3,100	218 00	7,194 00	5,100	275 00	9,075 00	[illegible]	357 20	11,787 60	4,400	335 00	11,055 00	4,600	375 00	12,375 00	4,320	380 00	12,540 00		367 80	12,137 40	[illegible]		[illegible]	[illegible]	8,102 00	200,340 00
4	30"	Geared O. S. and Y.	1	2,450	185 50	185 50	3,550	265 00	265 00	2,760	316 40	316 40	3,900	268 00	268 00	1,000	240 00	240 00	3,500	245 00	245 00		246 75	246 75	3,050		311 00	[illegible]	311 00	311 00
5	30"	O. S. and Y.	3	[illegible]	180 50	541 50	[illegible]	250 00	750 00	3,550	269 20	807 60	3,900	265 00	795 00	3,850	230 00	690 00	[illegible]	230 00	690 00		270 40	811 20	[illegible]		808 00	[illegible]	[illegible]	[illegible]
6	24"	Hydraulic	64	[illegible]	165 50	10,592 00	2,400	170 00	10,880 00	1,702	185 00	11,840 00	2,600	195 00	12,480 00	2,350	195 00	12,480 00	2,250	195 00	12,480 00		295 00	18,880 00	2,250		[illegible]	[illegible]	[illegible]	[illegible]
7	20"	Hydraulic	32	1,450	131 50	4,208 00	1,700	125 00	4,000 00	1,155	143 00	4,576 00	1,900	154 00	4,928 00	1,800	155 00	4,960 00	1,667	153 00	4,896 00		213 00	6,816 00	1,750		1,468 00	1,750	1,108 00	[illegible]
8	16"	O. S. and Y.	3	600	59 80	179 40	620	57 85	173 55	621	60 20	180 60	1,500	52 00	156 00	700	52 50	157 50	800	64 00	192 00		44 00	132 00	[illegible]		140 00	[illegible]	110 00	[illegible]
9	12"	Hydraulic	32	680	56 75	1,816 00	880	65 00	2,080 00	475	58 40	1,868 80	700	58 00	1,856 00	575	57 50	1,840 00	650	62 50	2,000 00		97 00	3,104 00	600		[illegible]	600	[illegible]	[illegible]
10	12"	O. S. and Y.	14	[illegible]	[illegible]	[illegible]	500	38 00	532 00	345	42 00	588 00	490	37 00	518 00	520	45 00	630 00	605	48 00	672 00		43 00	602 00	[illegible]		502 00	500	502 00	[illegible]
11	12"	Outside screw and floor stand	1	600	41 50	41 50	550	37 70	37 70	322	18 40	18 40	600	37 00	37 00	600	55 00	55 00	630	60 00	60 00		55 00	55 00	625		14 00	[illegible]	14 00	14 00
12	12"	Double gate	5	480	28 50	142 50	440	28 50	142 50	334	32 00	160 00	475	32 00	160 00	450	32 00	160 00	725	49 00	245 00		47 00	235 00	110		161 00	110	161 00	805 00
13	12"	Check	2	[illegible]	36 00	72 00	670	48 75	97 50	600	65 00	130 00	500	45 00	90 00	600	55 00	110 00	600	45 00	90 00		48 00	96 00	[illegible]		68 00	[illegible]	68 00	136 00
14	8"	Double gate	1	225	14 50	14 50	200	14 65	14 65	240	25 00	25 00	250	21 50	21 50	220	16 00	16 00	525	34 50	34 50		[illegible]	[illegible]	[illegible]		19 00	[illegible]	19 00	19 00
15	6"	O. S. and Y.	4	160	12 25	49 00	200	17 10	68 40	156	19 00	76 00	190	13 50	54 00	145	10 25	41 00	144	15 00	60 00		15 00	60 00	220		[illegible]	[illegible]	[illegible]	[illegible]
16	4"	O. S. and Y.	12	110	8 20	98 40	100	11 00	132 00	85	12 40	148 80	110	10 50	126 00	90	8 25	99 00	83	9 50	114 00		9 00	108 00	115		111 00	115	111 00	1,332 00
17	4"	Double gate	9	[illegible]	6 00	54 00	75	7 65	68 85	70	7 20	64 80	95	7 85	70 65	75	6 75	60 75	75	6 00	54 00		11 00	99 00	90		15 00	90	[illegible]	105 00
		Totals				$27,[illegible]			$30,367 15			$35,090 40			$35,115 15			$36,074 25			$36,908 50			$[illegible]			$29,810 00			$[illegible],887 00

BALTIMORE CITY WATER DEPARTMENT—FILTRATION DIVISION.

Tabulation of Bids for Cast-Iron Pipe and Specials—Contract No. 14—June 18, 1913.

Item.	Description.	Weight Tons.	Glamorgan Pipe and Foundry Company, Lynchburg, Va.		Standard Cast-Iron Pipe and Foundry Company, Bristol, Pa.		United States Cast-Iron Pipe and Foundry Company, Philadelphia, Pa.		Florence Iron Works, Florence, N. J.		Average of Bids.	
			Unit.	Total.	Unit.	Total.	Unit.	Total.	Unit.	Total.	Unit.	Total.
1	Bell and spigot straight pipe....	360	$22 90	$8,244 00	$22 45	$8,082 00	$23 90	$8,604 00	$22 69	$8,168 40	$22.985	$8,274.60
2	B. and S. standard specials.....	190	44 00	8,360 00	60 65	11,523 50	57 50	10,925 00	55 00	10,450 00	54.287	10,314.625
3	B. and S. special specials.......	90	52 00	4,680 00	60 65	5,458 50	70 00	6,300 00	82 80	7,452 00	66.362	5,972.625
4	Flange specials	370	63 00	23,310 00	60 65	22,440 50	80 00	29,600 00	80 80	29,896 00	71.112	26,311.625
	Totals....................	.....	....	$44,594 00	....	$47,504 50	....	$55,429 00	....	$55,966 40	....	$50,873.475

BALTIMORE CITY WATER DEPARTMENT—FILTRATION DIVISION.

Bids Opened on July 16, 1913—Contract No. 18.

Peddicord Sons Transfer Company..........................	$1 40 per ton
Briddell Transfer Company............................	2 90 per ton

BALTIMORE CITY WATER DEPARTMENT—FILTRATION DIVISION.

Tabulation of Bids for Pumping Machinery for Filtration Plant—Contract No. 19—September 10, 1913.

Item.	Item Number.	Southwark Foundry and Machine Company, Fifth Street and Washington Avenue, Philadelphia, Pa.	Allis-Chalmers Manufacturing Company, Milwaukee, Wis.	D'Olier Centrifugal Pump and Machine Company, Philadelphia, Pa.	Henry R. Worthington, 115 Broadway, New York.	Camden Iron Works, Camden, N. J.	Alberger Pump and Condenser Company, New York, N. Y.	Dravo-Doyle Co., Commercial Trust Building, Philadelphia, Pa.	Manistee Iron Works Company, Manistee, Mich.	Average Bid, Incomplete Bids Ignored.
		Price.	Price.	Price.	Price.	Price.	Price.	Price.	Price.	Price.
One horizontal D. S. centrifugal pump, 30,000 gallons capacity......	1	$3,669 00	$4,125 00	$3,940 00	$4,587 00	$4,560 00	$5,559 00	$6,900 00	$5,995 00	$4,762 86
Two horizontal D. S. centrifugal pumps, 28,000 gallons capacity each..	2	7,130 00	7,250 00	7,480 00	9,050 00	9,071 00	11,053 00	9,900 00	9,328 00	8,704 86
One horizontal D. S. centrifugal pump, 21,000 gallons capacity......	3	3,185 00	3,025 00	3,200 00	3,157 00	4,607 00	4,124 00	5,600 00	3,696 00	3,842 57
Three vertical S. S. centrifugal pumps, 4,000 gallons capacity each...	4	2,035 00	2,725 00	2,590 00	2,966 00	2,670 00	2,791 00	4,700 00	2,556 00	2,925 29
One two-stage horizontal centrifugal underwriter pump, 750 gallons capacity..............................	5	775 00	1,050 00	750 00	793 00	1,005 00	714 00	1,200 00	1,045 00	898 14
Two vertical centrifugal sump pumps, 200 gallons capacity each; two three-horsepower electric motors, automatic starters, etc..........	6	575 00	1,050 00	650 00	804 00	†1,431 00	852 00	1,300 00	1,040 00	951 71
One ten-ton hand revolving crane, crane rail and supporting column..	7	2,652 00	3,875 00	3,750 00	*3,800 00	‡3,710 00	3,960 00	5,000 00	....	3,821 00
Two vacuum pumps and motors..............................	8	884 00	980 00	980 00	920 00	1,143 00	665 00	2,200 00	....	1,110 29
Setting all pipes and valves..............................	9	1,904 00	1,600 00	2,534 00	3,000 00	3,587 00	2,530 00	5,200 00	....	2,907 86
Totals..............................	.....	$22,809 00	$25,680 00	$25,874 00	$29,077 00	$31,784 00	$32,248 00	$42,000 00	||	$29,924 57

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*Alternate bid for Item No. 7 of $2,536.

†Alternate bid for Item No. 6 of $1,615.

‡Alternate bid No. 1 for Item No. 7 of $4,240, and alternate bid No. 2 for Item No. 7 of $3,000.

||Bid irregular because incomplete.

BALTIMORE CITY WATER DEPARTMENT —FILTRATION DIVISION

Tabulation of Bids for Electric Power Equipment for Filtration Plant —Contract No. 20 September 10, 1913

Item.	Item Number	Westinghouse Electric and Manufacturing Company, Pittsburgh, Pa. Price	General Electric Company, Fort Wayne Department, Schenectady, N. Y. Price.	Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Price	Wilson Maltman Electric Company, Incorporated, Baltimore, Md. Price.	Ridgway Dynamo and Engine Company, Ridgway, Pa. Price.	Moloney Electric Company, St. Louis, Mo. Price.	Average Bid, Incomplete Bids Ignored. Price
Furnishing and placing 4 400 K V A transformers, and 1 50 K V A transformer	1	$5,962 00	$7,060 00	$6,460 00	$8,000 00		$6,460 00	$6,870 50
Furnishing and placing concrete switch cell structures, circuit breakers and high tension switch board	2	986 00	1,057 00	1,025 00	1,400 00			1,117 00
Furnishing and placing one 9 panel low tension switch board	3	3,825 00	4,520 00	3,600 00	4,350 00			4,073 75
Furnishing and placing all wiring	4	1,500 00	4,400 00	7,000 00	1,850 00			3,687 50
Furnishing and placing all starting switches and starters	5	4,009 00	2,068 00	3,300 00	3,350 00			3,181 75
Furnishing one 450 horsepower motor	6	2,360 00	3,183 00	3,260 00	4,400 00	$2,850 00		3,300 75
Furnishing two 350 horsepower motors	7	4,212 00	5,068 00	5,580 00	5,620 00	4,700 00		5,120 00
Furnishing one 275 horsepower motor	8	1,296 00	1,557 00	2,030 00	2,050 00	1,750 00		1,733 25
Furnishing one 75 horsepower motor	9	550 00	541 00	540 00	700 00	630 00		582 75
Furnishing three 60 horsepower motors	10	2,100 00	2,779 00	2,690 00	4,100 00	2,350 00		2,917 25
Totals		$26,800 00	$32,233 00	$35,485 00	$35,820 00	*	*	$32,584 50

*Bid irregular because incomplete.

BALTIMORE CITY WATER DEPARTMENT FILTRATION DIVISION

Tabulation of Bids for Head House, Pumping Station and Conduit Contract No. 21 August 27, 1913

Description	Item Number	Quantity	The Elkan Tufts Construction Company, 702 East Lexington St., Baltimore, Md.		Henry Smith & Sons Co., 111 Hanover St., Baltimore, Md.		The Whiting Turner Construction Company, Sexton Building, Baltimore, Md.		Average of Bids.	
			Unit Price	Total	Unit Price	Total	Unit Price.	Total	Unit Price.	Total.
Earth excavation	1	12,750 cubic yards	$0 88	$11,220 00	$0 60	$7,650 00	$0 91	$11,602 50	$0 79 2/3	$10,157 50
Rock excavation	2	280 cubic yards	7 50	2,100 00	5 00	1,400 00	3 75	1,050 00	5 41 2/3	1,516 67
Earth embankment	3	8,000 cubic yards	25	2,000 00	20	1,600 00	63	5,040 00	36	2,880 00
Seeding	4	4 5 acres	30 00	135 00	75 00	337 50	50 00	225 00	51 66 2/3	232 50
Concrete	5	4,950 cubic yards	10 90	53,955 00	11 80	58,410 00	15 10	74,745 00	12 60	62,370 00
Special surfacing of concrete.	6	2,120 square yards	45	954 00	35	742 00	30	636 00	36 2/3	777 33
Steel reinforcement	7	458,500 pounds	03 1/8	14,328 13	03 2/10	14,672 00	03 [illegible]	14,672 00	03 [illegible]	14,557 38
Miscellaneous steel work	8	10,200 pounds	07	714 00	10	1,020 00	07	714 00	08	816 00
Iron castings	9	41,500 pounds	04 1/2	1,867 50	07	2,005 00	07	2,905 00	06 1/6	2,559 17
Four inch terra cotta drains	10	100 linear feet	50	50 00	30	30 00	1 00	100 00	60	60 00
Six inch terra cotta drains	11	200 linear feet	70	140 00	35	70 00	1 00	200 00	68 1/3	136 67
Ten inch terra cotta drains.	12	100 linear feet	1 00	100 00	80	80 00	1 00	100 00	93 1/3	93 33
Venturi meter	13	Lump sum		2,200 00		2,300 00		2,000 00		2,166 67
Setting of special castings and sluice gates	14	127 tons	11 00	1,397 00	20 00	2,540 00	25 00	3,175 00	18 66 2/3	2,370 67
Shaft by-pass	15	lump sum		1,800 00		2,950 00		3,500 00		2,750 00
Auto truck scales	16	lump sum		600 00		650 00		1,000 00		750 00
Painting chemical tanks	17	lump sum		250 00		600 00		1,000 00		616 67
Painting concrete floors	18	lump sum		800 00		900 00		775 00		825 00
Totals				$94,610 63		$98,856 50		$123,439 50		$105,635 56

APPENDIX No. 1—FILTRATION DIVISION

Report on the Most Practicable Method for Filtering Baltimore's Water Supply.

By George W. Fuller, Consulting Engineer

BALTIMORE, June 19, 1912.

MR. EZRA B. WHITMAN, *President and Water Engineer,*
Water Board, Baltimore, Md.

DEAR SIR—Pursuant to your instructions of April 16, 1912, I have examined into, and herewith report on, the most practicable method for filtering the new impounded water supply of Baltimore to be obtained from the projected storage reservoir upon Gunpowder River at Loch Raven.

Statement of Problem.

On March 25, 1910, Messrs. John R. Freeman and Frederic P. Stearns made a comprehensive report on the enlargement and improvement of the Baltimore water supply. Among other things, they recommended the installation, near Lake Montebello, of a covered sand filter plant of a net area of 20 acres and of a normal rated capacity of 120 million gallons daily. The water from the new storage reservoir at Loch Raven would flow through a new tunnel connection to a coagulating and settling reservoir in the valley of Mine Bank run; and thence the partially clarified water would flow through the existing tunnel to the filter site near Lake Montebello. These recommendations were predicated upon a report by Mr. Allen Hazen under date of October 28, 1909, and also a report by Mr. George C. Whipple under date of March 11, 1910.

Mr. Whipple made an extended study of turbidity conditions relative to the water to be drawn from the proposed 20-billion-gallon reservoir at Loch Raven, which would have tributary to it a drainage area of about 305 square miles. This drainage area or water-shed is characterized by the presence of clay-bearing material over a substantial portion of it. It has many steep slopes, but practically no swampy tracts. Much of the area is under cultivation. Each rain brings much soil wash into the streams. Some of the turbidity is caused by silt and particles which subside quite readily, but much of it is due to microscopic or sub-microscopic particles of clay, which are frequently spoken of as colloids. They do not subside readily, and it is practically out of the question to remove them completely from the water at all times without some use of coagulating chemicals.

When the Gunpowder River was first developed as a source of water supply for Baltimore, some forty years ago, it was the plan, following heavy rains and when the river water was muddy, to shut off the head gates at the entrance to the tunnel. During these interruptions in delivery to the city, the needs of the water consumers were adequately taken care of from storage reservoirs in the city. As the consumption has increased, the inadequacy of this method has become more and more apparent. In fact, during the past year the rainfalls have been of such frequency, with respect to the appearance of high turbidities in the Gunpowder River, that it has been necessary at times to deliver to the citizens water which has been noticeably and objectionably turbid.

When the new storage reservoir is completed, it will impound the flood flows in order to insure a sufficient quantity of water in the future at times of dry weather.

Obviously, it will no longer be possible to supply the city with fairly clear water found during intervals between heavy rains. Muddy water will have to be stored in the new reservoir, and such water will mix with clear water to a considerable extent, depending upon conditions as to the quantity and quality of the inflowing water at times of rains, with respect to that already stored in the reservoir.

Mr. Whipple estimates that the turbidity of the water entering the new reservoir at Loch Raven will approximate 200 parts per million. Of great importance in the consideration of this proposition is an estimate of the turbidity to be expected throughout a term of years in the water as drawn from this proposed storage reservoir. The problem is a complex one, as it involves the influence of sedimentation upon the silt and clay particles in the water as it enters the reservoir; and also the effect of mixing in an irregular way of the partially clarified water with fresh quantities of soil wash which will enter the reservoir with every heavy rain. The latter action is at cross purposes with the clarifying benefits of sedimentation.

From extended observations from June to December, inclusive, 1909, Mr. Whipple concluded:

> Just what the minimum turbidity would be cannot be accurately predicted. It probably would not be less than five, and it might be as high as 10 or 15. Occasionally the water of the reservoir might be displaced in a comparatively short time and the sedimentation period reduced to a week, or even less. At such times the turbidity of the inflowing water would be high, and the entire body of water in the reservoir would be very turbid. If it be assumed that at such times the average turbidity of the inflowing water is 1,000, the turbidity of the water at the dam might be as high as 200, and possibly higher for short periods.
>
> On account of the many factors involved, it is difficult to make a reliable estimate of the average turbidity of the water that will be found at the lower end of the proposed reservoir. The following estimates seem to be reasonable deductions from the data obtained: Minimum turbidity, 5; most common turbidity, 10 to 20; ordinary maximum, 100 to 200; maximum rarely reached, 500. It is not likely that the turbidity of the water would be above 100 for more than about one month in the year.

Mr. Hazen records the impracticability of obtaining a thoroughly satisfactory supply from the new reservoir without adequate means of removing this turbidity. To prevent soil wash, and thus maintain the water from the storage reservoir free of muddiness and turbidity, is out of the question, if for no other reason than on the score of cost. It is necessary, therefore, to consider means of freeing the stored water uniformly and completely of turbidity.

It is not feasible, as Mr. Hazen states, to remove uniformly the large quantities of colloidal or sub-microscopic clay particles without a coagulant which will provide a gelatinous material to unite the tiny particles together into aggregates of such size that they may be removed by sedimentation or filtration, or both.

Mr. Hazen considers carefully the different available means of clarification of the water of the new Loch Raven reservoir. The first of these consists of coagulation and sedimentation without filtration. The other two projects comprise, in addition to coagulation and sedimentation, a sand filter plant near Lake Montebello, and a mechanical filter plant in the valley of Mine Bank Run, respectively.

In all three projects a coagulation and sedimentation plant would be installed in the valley of Mine Bank Run. The solid matters removed from the water could here be disposed of more advantageously than at any other site. With mechanical filters it is necessary to settle the water after coagulation only for four to six hours, or perhaps less. For the other two methods the period of sedimentation should be several days, in order to secure satisfactory results.

In each case it will be necessary to build a new tunnel, with proper shafts, connections, aerating facilities and regulating arrangements, to divert the water by gravity from the new impounding reservoir to the coagulating and sedimentation works in the valley of Mine Bank Run. After treatment at these works the water would flow by gravity through the existing tunnel to the vicinity of Lake Montebello, where, with each of the filter projects a covered filtered-water basin would be built. The filters themselves, however, would be located, in the case of a mechanical plant, in the valley of Mine Bank Run, and in the case of sand filters, near Lake Montebello.

The cost of construction and operation of those structures and devices that relate strictly to filtration of the water was estimated by Mr. Hazen, and these estimates were adopted by Messrs. Freeman and Stearns in the case of sand filters, as given on page 60 of their printed report. Mr. Hazen's estimates of cost for sand and mechanical filters are given on pages 198, 202, 206-208 of the printed report. These estimates may be summarized for reference as follows:

ESTIMATED COSTS OF CONSTRUCTION OF SAND AND MECHANICAL FILTER PLANTS WITH APPURTENANCES OF A RATED CAPACITY OF 120 MILLION GALLONS DAILY—1910 REPORT.

	Sand Filters.	Mechanical Filters.
Coagulating and settling basin and appurtenances, including land damages......	$370,000	$370,000
Filters and appurtenances, including land damages	1,540,000	1,200,000
New covered filtered-water reservoir........	150,000	150,000
	$2,060,000	$1,720,000
Add 15 per cent. for engineering and contingencies	309,000	258,000
	$2,369,000	$1,978,000

Mr. Hazen estimated the cost of operating sand and mechanical filters, when delivering 90 million gallons daily, as follows:

ESTIMATED COSTS OF OPERATION OF SAND AND MECHANICAL FILTER PLANTS WHEN DELIVERING 90 MILLION GALLONS DAILY—1910 REPORT.

	Sand Filters.		Mechanical Filters.	
	Per Million Gals.	Per Annum.	Per Million Gals.	Per Annum.
Labor, supplies, care of roads, grounds, light, fuel and wash water	$1.25	$41,200	$1.00	$33,000
Office-laboratory, conducting experiments and general expenses	0.70	23,000	0.70	23,000
Coagulant	0.20	6,600	1.57	52,500
Special labor for coagulation not included above	0.25	8,200	....	....
Totals	$2.40	$79,000	$3.27	$108,500

If we add five per cent. per annum to the estimated investment above given, to cover interest charges and extraordinary depreciation, the total yearly cost for the two types of filters is as follows:

Per Annum.	Sand Filters.	Mechanical Filters.
Operation and maintenance	$79,000	$108,500
Interest and depreciation	118,450	98,900
Totals	$197,450	$207,400

I agree with Mr. Hazen that coagulation and sedimentation, to be used as a complete process by itself, would not prove wholly satisfactory as regards the quality of water which would be produced at all times. The use regularly of hypochlorite of lime as stated would correct deficiencies from a sanitary standpoint. But the likelihood of shortcomings of sedimentation alone is quite serious as to the physical character of the water as delivered to the consumers, relative to appearance, taste or odors. I agree with Mr. Hazen that this arrangement should not be considered a permanent solution of the problem of supplying the City of Baltimore with pure and clear water. I view it solely as a temporary expedient, such as you have very properly adopted within the past few days to alleviate the annoyance of the water consumers due to the turbidity in the water as delivered during the past few months.

As between sand filters and mechanical filters, Mr. Hazen states that, when constructed according to the arrangements which he describes and when operated in the best manner, a thoroughly satisfactory quality of water in either case will be given at all times. I agree with him fully in this regard. He states, however, that he should give some preference to sand filters, and this opinion is concurred in by Messrs. Freeman and Stearns. It is predicated apparently on the following points, which are stated not to be of controlling importance; but as there is not much difference in the total cost as estimated by Mr. Hazen, it is evident that some weight has been given to them.

1. Sand filters are regarded as of greater reliability in removing the effects of whatever pollution there may be in the water.

2. While it is imperative to use coagulant in order to get clear water, it is stated that mechanical filters as distinguished from sand filters require the continuous application of coagulant and the period of coagulation is usually shorter. Very much less inconvenience is said to be anticipated with sand filters than with mechanical filters as regards red water, due to the corrosion of pipes by certain constituents of the water.

3. With the larger amount of coagulant such as required with mechanical filters, there is no increase in the total hardness with the application of sulphate of alumina, as proposed, but there is a slight change in the carbonate or temporary hardness to the sulphate or permanent hardness, and this makes the water slightly less desirable for boiler purposes.

Before expressing my views on these questions, it will be well to record briefly the additional data now at hand to throw light on the situation.

New Data.

You have called my attention to a number of new data locally obtained at Baltimore relative to this proposition, as follows:

A (Turbidity Data)—Additional records are now available showing the turbidity in the Gunpowder River water, as drawn from the present reservoir at Loch Raven for a full period of three years. As shown by monthly averages in the following table, the heavier rainfall of the past year has increased the turbidities materially above those ordinarily found during the period in which Messrs. Hazen and Whipple had these matters under observation.

MONTHLY AVERAGE TURBIDITIES, IN PARTS PER MILLION, IN THE WATER OF GUNPOWDER RIVER AT THE PRESENT LOCH RAVEN DAM.

Month.	Turbidity.	Month.	Turbidity.	Month.	Turbidity.
June, 1909	324	June, 1910	114	June, 1911	75
July	38	July	34	July	259
August	60	August	20	August	302
September	74	September	60	September	62
October	42	October	79	October	46
November	17	November	16	November	26
December	51	December	9	December	18
January, 1910	119	January, 1911	19	January, 1912	20
February	146	February	17	February	243
March	53	March	12	March	228
April	33	April	13	April	114
May	15	May	9	May	32
Annual Mean	81		34		119

The amount of rainfall is apparently of less importance than the frequency and intensity of precipitation. Under present conditions a sharp local shower may produce more turbidity than a long steady rain. In the future, with increased storage, the turbidity of the reservoir water will probably not reach as high figures as at present, but the duration of periods of well defined turbidity will be longer.

It is my conclusion that during ordinary years the water applied to sand filters can advantageously be treated with a coagulant for four to six months, averaging perhaps five months per year.

B (Fineness of Clay)—Further tests conducted at the experiment station at Loch Raven show that sand filters have been unsuccessful to an unusual degree in removing turbidity from the local water, either that from Loch Raven reservoir or that coming from the area tributary to a small basin above the station. In other words, the size of these submicroscopic clay particles is unusually small. This is confirmed by the coefficient of fineness of the particles causing the residual turbidity in this settled water, as determined by laboratory methods.

C (Open Sand Filters)—Under the direction of Mr. A. M. Quick, former Water Engineer, the Gunpowder Division of the engineering corps of your Department prepared plans and estimates of cost for a sand filter plant to be located near Lake Montebello. As compared with Mr. Hazen's project, the chief characteristics of this design are: First, that the 20 acres of filters are uncovered; and, secondly, that the sand layers will be cleaned in place by a washing machine of the Blaisdell type, such as is now in use at Wilmington, and being installed at Montreal. The estimates of cost of construction, when coupled with the figures above given by Messrs. Freeman and Stearns for settling and coagulating basins, are as follows:

ESTIMATED COST BY WATER DEPARTMENT OF OPEN SAND FILTER PLANT—CLEANED BY BLAISDELL WASHING MACHINES—INCLUDING 15 PER CENT. FOR ENGINEERING AND CONTINGENCIES.

Coagulating and settling basin and appurtenances, including land damages (Freeman and Stearns)	$425,500
Filters and appurtenances, including land damages	1,156,700
New covered filtered-water reservoir	288,800
Total	$1,871,000

The estimates of cost of operating this open sand filter plant, to be cleaned with a Blaisdell washer, and to yield 90 million gallons daily, according to the records of the Department which you have given me, are as follows:

	Per Million Gals.
Labor, supplies, care of grounds, lights, fuel and wash water	$0.91
Office and laboratory	0.35
Coagulant and labor connected therewith	0.45
Total	$1.71

It is seen that the office and laboratory cost is taken at one-half of Mr. Hazen's estimate, based on Washington experiences. The total allowance for heat, light and power, excluding labor, is taken at $0.295 per million gallons, which is less than half of a recent estimate for this item for a covered filter of this type at Jerome Park Reservoir, New York city.

Independently of developments at Baltimore, recognition has been taken of advances in the art of water purification as demonstrated on a large scale during the past two and one-half years or so, since Mr. Hazen's report was prepared. Reference is made briefly as a matter of record to the following points, which are worth mentioning, owing to the numerous features noted on the recent inspection trip which you and I took.

D (Sterilization)—Hypochlorite of lime for purposes of sterilization is now used at a large number of filtration plants, probably at more than 100, for purposes of insuring a higher grade of filtered water, hygienically, at all times. This oxidizing chemical is ordinarily applied to the filtered water, which varies but slightly in its composition as to organic matter. Hence, it is a simple matter to apply this efficient method at nominal cost in conjunction with filtration. With a plant which for purposes of clarification must receive the technical supervision that is needed for the treatment of the Gunpowder River water, no apprehension need be felt as to the application of this method uniformly and reliably. In my judgment, it eliminates whatever theoretical and sentimental preferences may have earlier existed as to the superiority of sand filters over mechanical filters for the treatment of clay-bearing waters.

E (Mechanical Filter Record)—The past few years have seen a wonderful record of uniformly successful daily accomplishments by mechanical filters, not only in securing uniformly a water free of turbidity, but also a water of excellent hygienic character independent of sterilization. Reference is made in particular to the well-known mechanical filters at Harrisburg, Cincinnati, Columbus, Louisville, New Orleans, Toledo and other places where turbid waters have been treated. In brief, the art of mechanical filtration, as shown by large and important plants in practice, has now come to the level of what was shown to be feasible in test devices a dozen years ago or more. Formerly the performances of some old-fashioned, poorly-arranged and ill-managed mechanical filters went a long way to offset the standing and technical merit of the process of mechanical filtration. No longer is this true.

F (English Filter Record)—While the accomplishments of mechanical filters have shown a steadily increasing mass of data accrediting their efficiency and manageability, the record of sand filters dealing with turbid waters has been one indicating an increased dependence upon more and more complete preparatory treatment. In 1898 I showed, in the tests conducted in Cincinnati, that sand filters, particularly during the winter months, experienced difficulty in showing normal results when the turbidity of settled waters exceeded about 30 parts per million. For short periods turbidities much in excess of this figure can be satisfactorily handled, as is actually the case on a large scale at Pittsburgh. During the summer months sand filters work more easily and can regularly dispose of turbidities at fully twice the figures above stated. Notwithstanding this, the history of sand filters during the past ten years has been one of difficulty in securing adequate clarification and normal volumes of water filtered at all times between cleanings. Preliminary filters have been built at Albany, Philadelphia, Wilmington and Steelton, and are now under construction at Pittsburgh and Montreal. The purpose of these devices is to keep the limits of turbidity or of the amount of vegetable growths in the applied water within workable limits. In some cases, as at Poughkeepsie, N. Y., Washington, D. C., and Indianapolis, Ind., sand filter plants are aided through a preliminary treatment, such as suggested for Baltimore by Mr. Hazen, namely, coagulation and sedimentation. In these instances it is the plan to apply a coagulant when the turbidity in the unfiltered water reaches 30 to 40 parts per million or more. In fact, as showed by our inspection trip, coagulants are used with sand filters with more frequency than was at first anticipated.

While mechanical filters, as you have noted from our recent inspection trip to a majority of the larger and better known plants of that type, uniformly produce clear, brilliant water, this is quite in contrast to the appearance of the effluent produced by some sand filter plants at times when the applied water shows turbidity in cases of the limits above indicated.

G (Red Water Question)—With the development of mechanical filters and the general improvement in the quality of water supplies, attention has recently been directed to what has frequently been called the "red water" trouble. This means the appearance in the water of iron rust, caused, to a considerable extent, by the corroding action of the water on pipes, particularly small pipes in the houses of consumers. This feature has been noted in the case of soft waters, and but rarely where the water has been hard. In other words, it has been confined largely to the Atlantic Seaboard. As between sand-filtered water and mechanically-filtered water, the records indicate that mechanical filters frequently show more corrosion, although this does not seem to be always the case. This seems to be associated in part with the liberation of carbonic acid in the water, due to the coagulating treatment. When carbonic acid is naturally high in the unfiltered water, it seems to cause at several plants noticeable quantities of iron rust and soluble iron in the water as drawn in the household. Even with soft waters it is feasible to keep this factor within reasonable limits by the addition of soda or of lime. By the use of lime and iron, however, as applied at Cincinnati and New Orleans as a coagulant instead of sulphate of alumina, the carbonic acid is eliminated from the filtered water. As a result of such coagulation it can scarcely be intimated that the "red water" factor is worthy of consideration. This method of coagulation is not applicable to waters which contain much vegetable stain, as at Toledo, Ohio; Watertown, N. Y.; Springfield, Mass.; New York city; Little Falls and New Milford, N. J. For the water of the Gunpowder River there is no coloring matter to make such a complication, and it is entirely feasible to utilize lime and iron rather than alum as a normal method of coagulation. With this process, then, the element of red water spoken of in several places in the report of Messrs. Freeman and Stearns may be dropped out of consideration.

Without further detailing the various recent developments in water filtration elsewhere, as noted by our inspection trips and from the study of results recorded by those in charge of the more important plants, I shall state my findings upon the main points at issue at Baltimore, as follows:

Covered Sand Filter Plant.

In my judgment, the plan for treating the new Baltimore supply in a covered sand filter plant in accordance with the general experience at Washington, will give a satisfactory result at all times, upon the assumption that the plant would be well built and well managed, as Mr. Hazen states. I believe that the estimates of cost of construction as given in the printed report for 1910 are fair and reasonable. In looking into the matter of details it has seemed to me that the estimates of cost of construction for the coagulating and settling basin are perhaps somewhat low, particularly when compared with corresponding figures on the mechanical filter project. However, you have informed me that Mr. Hazen's assumptions as to land values are rather high, so I have concluded that these two items may be reasonably assumed to offset each other.

Regarding the estimated cost of operation of a covered sand filter plant, I agree fully with Mr. Hazen's estimates except in so far as relating to the chemicals used for treating the water. As already stated, additional data have been obtained at Baltimore since Mr. Hazen's report was prepared, indicating that the turbidity would be materially greater on an average than he assumed. In fact, as already stated, I believe that, based on experiences with other sand filter plants, a coagulant would be used at Baltimore for five months during an average year, and that its cost may be assumed to be 60 per cent. of that which would be required with a mechanical filter plant.

I also believe that it would be prudent, from a hygienic standpoint, to assume that about five pounds of hypochlorite of lime would be added to the filtered water at all times for purposes of sterilization.

As regards the "red water" aspects of the proposition, I consider that the use of lime and iron is feasible for the treatment of the local water, and that this treatment will cause the factor of corrosion to come under satisfactory control; and, in fact, to be less than would be the case with plain sand filtration without any coagulating chemical.

In the event that sulphate of alumina should be preferred for any reason as a coagulating chemical, it is possible to use lime or from time to time to eliminate any excessive quantities of free carbonic acid. This is a part of the mechanical filter project recently recommended for the Croton water supply of New York city.

Open Sand Filter to Be Cleaned by Washing Machines After the Designs of the Water Department.

I have had occasion to study carefully the behavior of the Blaisdell washing machine as now used at Wilmington, Del. In fact, I recommended its adoption at Montreal, P. Q., for the cleaning of high-rate sand filters which will receive the clear effluent of high-grade preliminary filters. I have also studied the suitability of this machine for the Croton filter project for New York city.

To apply this method of sand cleaning to uncovered filters in the climate at Baltimore is, in my judgment, a risky proposition. In fact, I am very skeptical as to its reliability of performance during the winter months when ice upon the filters becomes a serious factor. It is proposed as a part of this design to provide means for eliminating the ice either by cutting or melting appliances. Their success has not yet been demonstrated on a practical scale, and I am unwilling to advise them in view of present evidence.

To apply this method of sand cleaning, it is necessary, in my judgment, to use covered filters. This would not only bring the expense of construction up to, but somewhat in excess of, the Washington style of design, as estimated by Mr. Hazen. This excess cost is due partly to the necessity of having a higher vaulting for the filters in order to give head room for the washing machines, and partly to the cost of the machines themselves with the necessary wiring and heating arrangements.

Recent economies in sand cleaning, such as developed at Washington and several other places, have now reached a point where I am convinced that the advantages of the Blaisdell washing machine are ordinarily insufficient to offset the increased investment which it requires in order to put the process on an undisputedly safe and reliable basis.

As to estimates of cost of operation, I have compared carefully the figures prepared by your predecessors with those given by Mr. Hazen and others with which I am personally familiar elsewhere.

There is nothing in the Blaisdell arrangement which justifies any reduction either in the investment or in the operation and maintenance of a coagulating department; or in the laboratory or supervision of the sand filter proper. Moreover, the Blaisdell machine requires a substantial item for the electric current to operate the machine and to provide suitable heating during the winter.

I am aware that at the new Loch Raven dam the opportunities look promising for an advantageous installation of an electric generating station actuated by waterwheels driven by the surplus water. Notwithstanding the favorable outlook for the development of cheap electric power by the Water Department, I am clearly of the opinion that there is no superiority or economy in performance to be expected under the local conditions with a sand filter plant designed with mechanical appliances for washing the sand in place. Therefore, I dismiss this design and confine my comparisons to the relative merits of a sand filter plant of the Washington type and of a mechanical filter plant following the lines of successful practice at Cincinnati and New Orleans.

Mechanical Filter Plant.

I accept Mr. Hazen's report as regards the location, size and arrangement of a mechanical filter plant and its various appurtenances, together with estimates of cost of the same, with the following exceptions:

I believe that the cost of construction of the mechanical filters should be reduced from $10,000 per million gallons daily capacity to $7,500. The actual corresponding cost for the Cincinnati plant was less than $6,000. Making reasonable allowances for increases in price of labor and whatever discrepancies there may be as to an administration building and outside pipe lines, I consider that $7,500 is a fair and reasonable figure. This would mean, with 15 per cent. for engineering and contingencies, a saving of $345,000 over Mr. Hazen's estimate.

I consider that Mr. Hazen's estimate for cost of operation and maintenance is fair and reasonable, except that I would add a small item covering the cost of sterilizing the filtered water, as stated above in connection with sand filters.

Comparative Summary.

Having dismissed the open sand beds with Blaisdell washing machines as impracticable, in my judgment, for local conditions, for the reasons stated in preceding pages, it remains to compare the relative merits of sand filters and mechanical filters in the light of additional information obtained since Mr. Hazen's report of October, 1909. In point of efficiency, I rate them as equal. Their comparative costs I estimate to be as follows:

REVISED ESTIMATE OF COST OF CONSTRUCTING SAND AND MECHANICAL FILTERS, WITH APPURTENANCES, OF A RATED CAPACITY OF 120 MILLION GALLONS DAILY.

	Sand Filters.	Mechanical Filters.
Coagulating and settling basin and appurtenances, including land damages......	$370,000	$370,000
Filters and appurtenances, including land damages	1,540,000	900,000
New covered filtered-water reservoir.......	150,000	150,000
	$2,060,000	$1,420,000
Add 15 per cent. for engineering and contingencies	309,000	213,000
Total..................................	$2,369,000	$1,633,000

REVISED ESTIMATES OF COST OF CONSTRUCTION OF SAND AND MECHANICAL FILTER PLANTS WHEN DELIVERING 90 MILLION GALLONS DAILY.

	Sand Filters.		Mechanical Filters.	
	Per Million Gals.	Per Annum.	Per Million Gals.	Annum. Per
Labor, supplies, care of roads, grounds, fuel, lights and wash water	$1.25	$41,200	$1.00	$33,000
Office, laboratory and general expenses	0.70	23,000	0.70	23,000
Coagulant	0.95	31,500	1.57	52,500
Special labor for coagulant........	0.25	8,200	....	....
Sterilizing chemical	0.10	3,300	0.10	3,300
Totals......................	$3.25	$107,200	$3.37	$111,800

If we add five per cent. per annum on the estimated investment above given, to cover interest charges and extraordinary depreciations, the revised total yearly cost for the two types of filters is as follows:

Per Annum.	Sand Filters.	Mechanical Filters.
Operation and maintenance	$107,200	$111,800
Interest and depreciation	118,450	81,650
Totals	$225,650	$193,450

Conclusions and Recommendations.

Taking into account all of the data bearing upon the filtration of the proposed new water supply from the Gunpowder River at Loch Raven, I conclude, without any qualifications whatever, that a mechanical filter plant located either in the valley of Mine Bank Run or near Lake Montebello, when well built and well operated, will give a thoroughly satisfactory quality of filtered water, hygienically and with respect to appearance, tastes and odors, and its effect upon the distributing pipes; that its results will be fully equal to those which could be secured by a first-class sand filter plant; that it will be somewhat more manageable than a sand filter plant when treating the varying conditions of water which will be drawn from the new impounding reservoir; and that its cost will be less.

I recommend the adoption of a mechanical filter plant, with all necessary appurtenances for the treatment of the future water supply of Baltimore.

Very truly yours,

George W. Fuller.

APPENDIX No. 2—FILTRATION DIVISION

Report of Tests on Experimental Filter.

Object.

These experiments were carried on by the Filtration Division of the Baltimore City Water Department, under the direction of J. W. Armstrong. The purpose was to determine whether or not it would be safe to omit the brass wire screen between the sand and gravel layers usually employed in filters using high rate of wash. In the Baltimore filters now under construction, it is planned to use a rate of wash of about two cubic feet per square foot of sand area per minute. These experiments were carried on primarily to show whether or not any movement would take place in the upper layer of gravel when washing at varying rates between 1½ feet and six feet vertical rise per minute.

Apparatus.

The apparatus consisted of a filter tank, piping and fittings. The tank was three feet six inches by three feet nine inches inside dimensions, built of two-inch yellow pine, tongue and groove boards, painted with asphaltum paint, after erection. A gutter, of the same size as that to be used in the completed plant was built into one side of the bank as shown on the sketch. Two windows of seven-inch clear width were set into the side of the bank opposite the piping, and gave a clear view of the gravel layer. The lower window extended from about 1½ inches to about three feet one inch above the bottom, this being sufficient for the necessary observation. A three-inch supply pipe furnished water at from 115 to 125 pounds pressure (per gauge). This supply branched, a two-inch pipe being taken off for filtering, and a three-inch for washing. The filter line was not used to any extent during the test. The three-inch wash water pipe supplied the six-inch manifold. A valve and a Gem meter reading to cubic feet were inserted in the three-inch line. The supply was distributed by seven 1½-inch laterals, spaced six inches center to center; each lateral contained a single row of 14 holes spaced at 2½ inches, drilled and reamed to 7-32 of an inch. There was sufficient play to permit these laterals to be turned through a 180-degree, so that the jets pointed either upward or downward, as desired. A five-inch pipe, whose bottom of invert was at the level of the lowest point of the gutter, led the wash water through a five-inch waste to a sump. As most of the readings were taken at night, it was necessary to illuminate more fully than ordinarily. An arc lamp was suspended over the tank and a 16-candlepower, good reflector was hung before the window. The reflector threw a good light on the gravel next to the window, and when suspended inside the tank, and just above the gutter, gave a good view of the interior of the tank. The gravel was delivered in sacks, graded to the following sizes:

Passing a 3-inch mesh, retained on 1 inch.
Passing a 1-inch mesh, retained on ⅝ inch.
Passing a .⅝-inch mesh, retained on ⅜ inch.
Passing a ⅜-inch mesh, retained on 3/16 inch.
Passing a 3/16-inch mesh, retained on No. 10.

For grading the gravel there were a series of circular hand sieves with the following size meshes: 1-inch, ⅝-inch, 7-16 inch, ¼-inch and No. 10.

Procedure.

For the first series the gravel was used as shipped. For the following tests it was necessary to grade the gravel before beginning the series. The gravel was then placed in layers to correct depth, screened and leveled. No sand layer was used. There were two methods of observation: For the first four series water was admitted at approximately the rate desired; a reading of the meter was taken and the action of the gravel observed for from five to fifteen minutes, depending upon the movement; a second meter reading was then taken to give the quantity passed. For most of the readings a stop-watch was used, while in the other cases an ordinary watch, reading to seconds, was used. The valve was then adjusted for a new rate and the above procedure repeated for as many rates as were desired. For the last three sieves the valve was gradually opened by an operator who remained by it during the test. The observer signaled to the operator to hold the valve at such openings as caused movements in the gravel layers. By adjusting the flow, the rising velocity which caused motion in the gravel was determined. Whenever the movement of the gravel was noteworthy, meter readings were taken to determine the rate. After each series, or whenever the gravel seemed unusually disturbed, the filter was drained and the bed examined for holes, fissures, or other surface disturbances.

Description of Tests.

Series 1—For the first test, the openings in the laterals were turned downward. The size and thickness of the gravel layers was as follows:

Eight-inch depth of material passing a 3-inch screen and retained on a 1-inch screen.

Three-inch depth of material passing a 1-inch screen and retained on a ⅝-inch screen.

Two-inch depth of material passing a ⅝-inch screen and retained on a ⅜-inch screen.

One and one-half inch depth of material passing a ⅜-inch screen and retained on a $\frac{3}{16}$-inch screen.

Rates of 1.51 and 1.78 feet vertical rise per minute had no effect on this arrangement. The three-sixteenth inch layer of material being too coarse to properly support a sand layer, a layer of material, grading between three-sixteenth inch and No. 10, was added for the remainder of the tests.

Series 2—During the second test, the laterals opened downward. The following thickness of gravel were used, the grading being approximate and the error being less than one-sixteenth inch from the given size for any case:

Four-inch depth of material passing a 3-inch mesh and retained on a 1-inch mesh.

One and one-half inch depth of material passing a 1-inch mesh and retained on a ⅝-inch mesh.

One-inch depth of material passing a ⅝-inch mesh and retained on a ⅜-inch mesh.

Three-eighths inch depth of material passing a ⅜-inch mesh and retained on a $\frac{3}{16}$-inch mesh.

One and one-quarter inch depth of material passing a $\frac{3}{16}$-inch mesh and retained on a No. 10 mesh.

At the rate of 4.63 feet vertical rise per minute, gravel particles rose about one-half inch, as if over a jet, and fell back into original position. Fissures seemed to exist, as boiling action was localized. The particles which moved were apparently mica or very coarse sand, other particles remaining in equilibrum. As the rate was increased to 6.28 feet vertical rise per minute, the disturbance was localized but violent, the particles rising one inch vertically in extreme cases, and falling back into place. Some centers of disturbance were constant and others intermittent. The disturbance seemed to radiate from these spots, which were about two inches to three inches apart. As the rate was reduced to 5.20 feet vertical rise per minute, the gravel became quieter, isolated grains rising at intervals. As the rate was further reduced to 3.73 feet vertical rise per minute, there was no apparent movement, other than a shifting of a particle from side to side at long intervals. As the bed was drained after this series, it was noted that coarse sand and mica had deposited on the upper gravel layer, some sand having penetrated this layer a very short distance (one-eighth inch or less).

Series 3—The laterals were then turned so that the openings were directed upward. The gravel was replaced as in the preceding series. Note that the gravel depth is from the bottom of the tank, and not from the top of the laterals, which would give the effective depth. The rate of 3.14 feet vertical rise per minute produced no disturbance other than a slight shifting due to the rise of mica and sand grains from the lower layers. As the rate increased to 3.75 feet vertical rise per minute, there was general disturbance along the side of the tank, due to particles forcing their way up through the upper layer. At a rate of 3.87 feet vertical rise per minute, spots appeared in the area, but became intermittent and quieter after a few minutes' run. This continued through the rates of 4.35 and 4.92 feet vertical rise per minute, at which latter rate the surface agitation became general, though more violent at the glass than elsewhere. The gravel fell back into place after a maximum rise of one-half inch in extreme cases, some particles being barely disturbed. Agitation became less after a few minutes' run.

Series 4—The laterals were left in the upward position, and the gravel layers changed to the following depths, measured from the top of the laterals:

Five-inch depth of material passing a 3-inch mesh and retained on a 1-inch mesh.

Three-inch depth of material passing a 1-inch mesh and retained on a ⅝-inch mesh.

Seven-eighths inch depth of material passing a ⅝-inch mesh and retained on a 7/16-inch mesh.

Two and seven-eighths inch depth of material passing a 7/16-inch mesh and retained on a ¼-inch mesh.

One and one-quarter inch depth of material passing a ¼-inch mesh and retained on a No. 10 mesh.

Beignning with a rate of 1.47 feet vertical rise per minute, there was no movement until the rate of 3.51 feet vertical rise per minute was reached, at which point there was a slight vibration of finer particles of the upper layer, but no rising. At the rate of 3.96 feet vertical rise per minute, particles of mica rose, and pieces of gravel forced their way up through the upper layer, rising about one-eighth inch and falling back into place. There were several jet-like spots over the area, but most of the disturbance was at the glass. At the end of run the bed showed a hole about one-half inch in diameter through the upper layer. Some very fine material appeared banked in slightly raised spots.

Upon increasing the rate to 4.84 feet vertical rise per minute, some small particles from the seven-sixteenths inch to one-quarter inch size layer pushed their way up into the upper layer. There was agitation over the area, but mostly at the glass, where particles rise about three-sixteenths inch vertically and return to place. Upon draining, the bed showed more pronounced banking of very fine material. The finest material was again in banks or windows, showing lighter than exposed coarse material. The height of this fine material, which was smaller than No. 10, was unappreciable.

Series 5—The preceding test was repeated with the laterals upward and the gravel layers in the same position as before. Beginning at a rate of 1.14 feet vertical rise per minute, there was no movement until a rate of 2.47 feet vertical rise per minute was reached, at which time there was a little vibration of the particles which ceased, however, after a few minutes' run. The gravel was still undisturbed at a rate of 2.99 feet vertical rise per minute. At a rate of 3.07 feet vertical rise per minute, there was a slight vibration of particles, but no change in position. At 3.43 feet vertical rise per minute, there was a slight sidewise motion in the smaller particles, but no rising. At a rate of 3.93 feet vertical rise per minute, the gravel was on the point of rising. At the rate of 4.20 feet vertical rise per minute, the gravel was like gently boiling water. At the rate of 5.34 feet vertical rise per minute, the gravel boiled in intermittent spots, afterward falling back into place.

Series 6—The laterals were left opening upward, as in the preceding series, and the gravel layers changed to the following thicknesses; depths being measured from the top of the laterals:

Four and one-quarter inch layer of material passing a 3-inch mesh and retained on a 1-inch mesh.

Two and one-half inch layer of material passing a 1-inch mesh and retained on a ⅝-inch mesh.

One and three-quarters inch layer of material passing a ⅝-inch mesh and retained on a 7/16-inch mesh.

One and one-half inch layer of material passing a 7/16-inch mesh and retained on a ¼-inch mesh.

One inch layer of material passing a ¼-inch mesh and retained on a No. 10 mesh.

At the rate of 4.31 feet vertical rise per minute, there was considerable boiling at the glass and over the area. As the valve was closed to a rate of 4.04 feet vertical rise per minute, the gravel bubbled in well-defined jets. Upon further closing, bubbling ceased at the rate of 3.94 feet vertical rise per minute, though there was still a slight vibration of the particles. Upon reopening the valve, bubbling recommenced very gently, in jets at the rate of 4.23 feet vertical rise per minute. At a rate of 4.26 feet vertical rise per minute, the boiling was general and violent, but the particles fell back into their original position. There was no movement in the seven-sixteenth to one-quarter inch size, showing the coarser material.

Series 7—With the laterals opening upward and the gravel layers left in the same beds, the above tests were repeated. The valve was slowly opened until a rate of 4.29 feet vertical rise per minute was reached, at which point bubbling began immediately. Upon opening further to a rate of 4.70 feet vertical rise per minute. the jetting became general. There were many disturbed spots, but their activity varied from time to time. The valve was then opened to the maximum, giving a rate of 5.29 feet vertical rise per minute. The boiling action was not severe, the fine gravel particles varying not over three-sixteenth of an inch and falling back into place. This disturbance was confined to the upper layer.

Conclusions.

In reviewing the foregoing tests, it should be noted that the disturbance was probably greater in the tank than it would be in a standard size filter tank, due to the high ratio between area of tank size and area of filter bed. The smooth side of the glass window also probably increased disturbance immediately before it, due to reduced friction. After repeated tests on the same layer of gravel, the rate when agitation begins was materially raised, due probably to the washing out of the mica and sand grains which were in the lower gravel layers.

With the laterals opening downward, it would be safe to use a rate of 3.75 feet vertical rise per minute. Higher rates could probably be used, as the agitation under the rate of 5.20 feet vertical rise per minute affects only the upper half-inch or less of the finest layer, and that only in spots. Sand would probably find its way into the finest layer for a depth of from one-quarter to one-half inches in spots, though probably not deeper than one-eighth inch on the average. If there is any possibility of getting a wash at a rate greater than from 3.5 to 4.0 feet vertical rise per minute, the finer layer should be at least 1¼ or 1½ inches thick.

With the laterals opening upward, it appears that the thicknesses of the lower layers of gravel have little to do with its stability. In Series 3 there was but 1¼ inches of the coarsest gravel effective over the laterals, with a rate of 3.75 feet vertical rise per minute when the particles of gravel began to rise slightly in the upper layer. An increase to five inches effective depth for the coarsest layer, in Series 4 and 5, gave a rate of 3.96 and 3.93 feet vertical rise per minute, respectively, with the finest layer kept at 1¼-inch and the intermediate layers strengthened. Decreasing the lowest layer to 4¼ inches, effective depth, and decreasing the upper layer one inch with proportional decreases in the intermediate layers, gave rates of 3.94 and 4.29 feet vertical rise per minute, respectively, when bubbling began, for Series 6 and 7.

From the above it appears that the layers as used in Series 6 and 7 are the more economical, being more efficient in operation and cheaper in cost of material, than the gravel thicknesses used in Series 4 and 5. The finest sizes of gravel are much more expensive than are the coarser sizes. However, the agitation is somewhat less under higher rates of wash for Series 4 and 5 than for Series 6 and 7.

All of the gravel layers over laterals opening upward could be washed at a rate of from 3.75 feet vertical rise per minute to 4 feet without disturbing them, though Series 3 is not satisfactory under high washes.

Series 2 illustrated the action of sand under high rates of wash. At the close of the test, there was a thin layer of sand in top of the finest gravel layer, and not extending more than one-eighth inch into it. This sand had been washed up from the lower layers, which were somewhat sandy, by the higher rate of 6.28 feet vertical rise per minute. This rate caused greater agitation in the upper gravel layer than did any other wash noted, and the action of the sand may be taken as a representative of the worst mixing that would occur in any of the above tests.

Respectfully submitted,

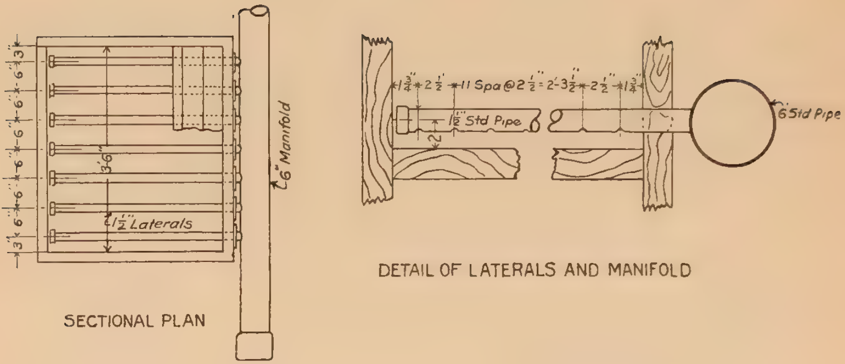
(Signed) Frank Fame, Jr.

TABULATION OF THE ACTION OF GRAVEL UNDER VARIOUS RATES OF WASHING.

Series No.	Style.	Laterals Opening Upward or Downward.	Rate of Vertical Rise per Minute.	Movement of Gravel.
1	A	Downward.......	1.51	No movement.
			1.78	No movement.
2	B	Downward.......	4.63	Boiling in jets, rising about ½″ in extreme cases.
			6.28	Boiling localized, but violent; 1″ in extreme cases.
			5.20	Boiling gently, isolated grains rise in extreme cases.
			3.73	No apparent motion, except at long intervals.
3	B	Upward..........	3.14	Slight shifting of grains.
			3.75	Slight agitation near glass.
			4.92	Boiling general, ½″ rise in extreme cases.
4	C	Upward..........	1.47	No movement.
			3.51	Slight vibration of finer particles.
			3.96	Particles of mica rise, slight boiling.
			4.84	Boiling over entire area, rising $\frac{3}{16}$″.
5	C	Upward..........	2.47	No movement.
			2.99	No movement.
			3.07	No movement.
			3.43	Slight sidewise motion.
			3.93	Particles on point or rising.
			4.20	Like gently-boiling water.
			5.34	Boils intermittently in spots.
6	D	Upward..........	4.31	Considerable boiling over entire area.
			4.04	Bubbles in well-defined jets.
			3.94	Bubbling ceases, slight vibration.
			4.23	Bubbles in jets.
			4.26	Bubbling general and violent.
7	D	Upward..........	4.29	Bubbling begins intermittently.
			4.70	Jetting becomes general.
			5.29	Boiling not severe, $\frac{3}{16}$″ rise in extreme cases.

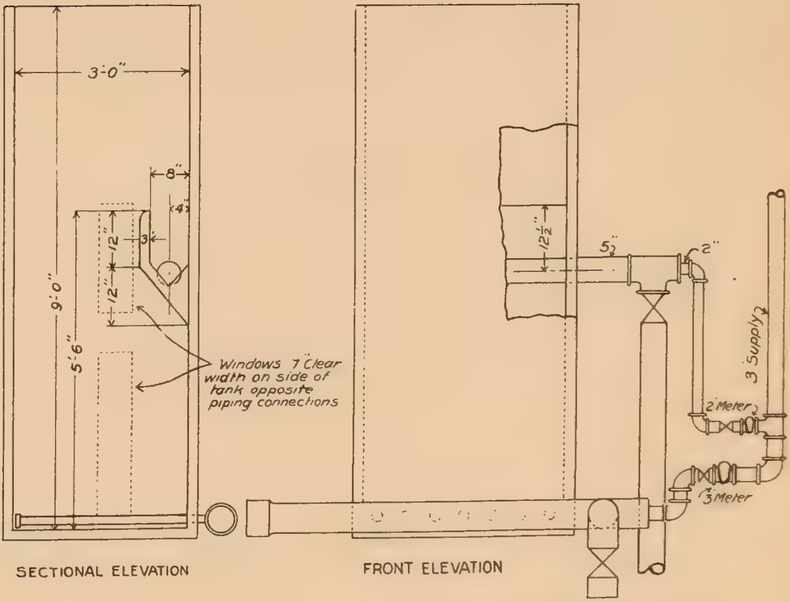
Description of Gravel Layer.	Depth in Inches.	
	Style A.	Style B.
Passing 3-inch screen, retained on 1-inch.....	8	4
Passing 1-inch screen, retained on ⅝-inch....	3	1½
Passing ⅝-inch screen, retained on ⅜-inch...	2	1
Passing ⅜-inch screen, retained on 3/16-inch...	1½	⅜
Passing 3/16-inch screen, retained on No. 10....	....	1¼

Description of Gravel Layer.	Depth in Inches.	
	Style C.	Style D.
Passing 3-inch screen, retained on 1-inch.....	7¾	7
Passing 1-inch screen, retained on ⅝-inch....	3	2½
Passing ⅝-inch screen, retained on 7/16-inch...	⅞	1¾
Passing 7/16-inch screen, retained on ¼-inch...	2⅞	1½
Passing ¼-inch screen, retained on No. 10....	1¼	1


3"
6"
6"
6"
6"
6"
6"
3"
3'-6"
1½" Laterals
6" Manifold
1¾"
2½"
11 Spa @ 2½" = 2'-3½"
2½"
1¾"
1½" Std Pipe
2"
6" Std Pipe

SECTIONAL PLAN

DETAIL OF LATERALS AND MANIFOLD


3'-0"
8"
4"
3"
12"
12"
9'-0"
5'-6"
Windows 7" Clear width on side of tank opposite piping connections
12½"
5½"
2"
3" Supply
2" Meter
3" Meter

SECTIONAL ELEVATION

FRONT ELEVATION

EXPERIMENTAL FILTER TANK

APPENDIX No. 3—FILTRATION DIVISION

Experiment to Test the Strength of Brass Strainer Plates.

Object.

The object of this test was to determine the strength of the semi-elliptical brass strainer plates, as proposed for use in the filter plant.

Apparatus.

The apparatus used for breaking the plate consisted of two cast-iron stands, which supported two three-inch channels, riveted together and separated by steel plates. The plate to be tested was made of commercial sheet brass, 30 inches long, No. 15 Browne and Sharpe gauge. It was bent to the form of a semi-ellipse, whose major diameter was four-inch and whose rise was 1¾-inch. The brass plate had three 21-32 inch holes drilled through it, 11½ inches from center to center. The plate was suspended by five-eighths inch bolts passing through the two outer holes, and the load was applied by means of five-eighths inch hook bolts, which passed through the center holes and was supported by cross-bar of three-quarter by one and one-half inch steel. The brass plate had its concave side turned upward. In order to keep it from flattening out under the weight of the loads, one-quarter inch by one inch bars were clamped along its edge at four points by one-inch by one-quarter inch clamps.

The one-quarter-inch by one inch bars were cut at the center point and separated so as to permit the brass plate to bend freely. The hook bolt that carried the load was supported by three-quarter inch by one and one-half inch bar-iron, resting on top of the brass strainer plate. It had four pins inserted into it, which prevented the strainer plate from spreading. A 12-inch valve bonnet suspended by a chain was used for supporting the load which was applied in the form of pig lead.

First Experiment.

The first plate to be broken was a No. 15 Browne & Sharpe gauge. Under the initial load of 179 pounds the plate deflected one thirty-second of an inch at the center. Under load of 244 pounds, it deflected one-sixteenth of an inch, and under load of 309 pounds, it completely failed by bending at the center, the upper edge of the plate buckling inward. It was found that this plate was annealed in the process of bending and its strength was thus greatly reduced.

Second Experiment.

This plate was also No. 15 Browne & Sharpe gauge, 30 inches long, supported and loaded in the same manner as the previous one. On application of the initial load of 179 pounds there was an apparent deflection of one-sixteenth of an inch, but this deflection must have been due to improper adjustment of the plate, as it only settled one sixty-fourth of an inch when a load of 369 pounds was applied. With the application of each additional load, a further deflection of one sixty-fourth of an inch was noted, until a weight of 777 pounds was reached, when a slight buckling was noticed at about the center point of the plate. On the application of a load of 847 pounds the plate failed completely by buckling at the center.

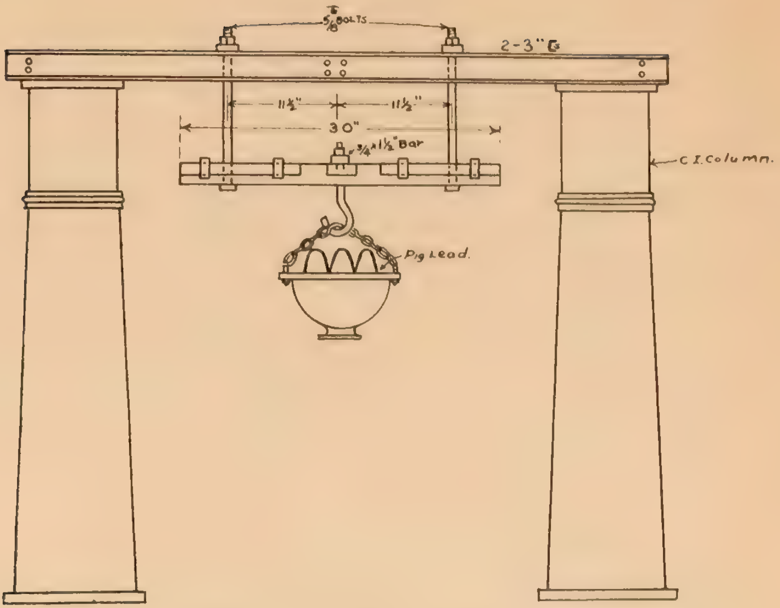
Third Experiment.

The third test was made on a brass plate 29 inches long, made of No. 12 Browne & Sharpe gauge, bent, supported and loaded in the same manner as the other plates. There was no deflection upon application of the initial load of 179 pounds, nor upon a load of 244 pounds. With the addition of each new pig lead which weighed from 65 to 70 pounds, deflection increased from one sixty-fourth to one thirty-second of an inch until 515 pounds was reached, and upon application of 580 pounds the plate failed completely by buckling at the center. This plate was injured by annealing prior to the process of rolling, which accounts for its very low strength.

Conclusions.

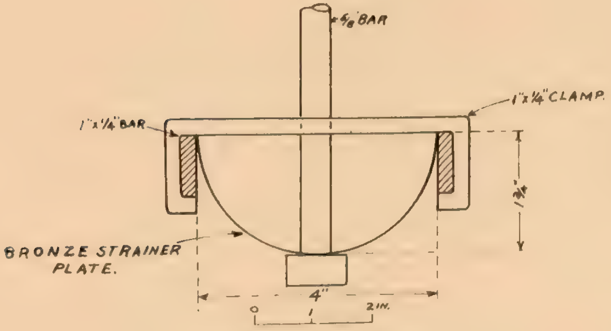
The strainer system, as planned for the Baltimore filters, will have the brass strainer plates held in position by one-quarter inch brass "U" bolts, spaced 11 inches from center to center. In applying the wash water they will be stressed uniformly in an upward direction due to impenging of the water against the plates. The "U" bolts will act as supports. As it is not possible to make a test under actual operating conditions, it was decided to take double the space and apply the load at the center. A length of 23 inches between supports was used instead of 22 inches, in order to make allowance for the cross-bar supporting the load. The load and distance between the supports of the test piece were such that the bending moment developed was approximately four times greater than could be obtained with a similar load applied under actual operating conditions.

It will thus be seen that Plate No. 2, which is the only one broken that gave a fair test, would have safely withstood a load of a little over 3,000 pounds had it been tested under the conditions that obtain in actual operation. This gives a factor of safety of between seven and eight.


5/8 BOLTS
2-3" ⊏
11½"
11½"
30"
¾×1½" Bar
C.I. Column.
Pig Lead.

FRONT ELEVATION.

0
1 FT


5/8" BAR
1"×¼" CLAMP.
1"×¼" BAR
1¾"
BRONZE STRAINER PLATE.
4"
0
1
2 IN.

CROSS SECTION.

BALTIMORE CITY WATER DEPARTMENT
FILTRATION DIVISION

SKETCH SHOWING METHOD OF
TESTING SECTION OF
BRONZE STRAINER PLATE

FILTRATION DIVISION.

Test of Brass Strainer Plates Proposed for Filtration Plant.

TEST No. 1.

Load Lbs.	Deflection.		
	Left.	Center.	Right.
179	....	1/32-inch.	....
244	....	1/16-inch.	....
309	....	Failed.	....

TEST No. 2.

Load Lbs.	Deflection.		
	Left.	Center.	Right.
179	....	1/16-inch.	1/32-inch.
244	1/64-inch.	5/64-inch.	3/64-inch.
309	1/64-inch.	5/64-inch.	3/64-inch.
374.5	1/64-inch.	3/32-inch.	3/64-inch.
440	1/64-inch.	1/8-inch.	3/64-inch.
510	1/64-inch.	1/8-inch	3/64-inch.
574.5	1/64-inch.	5/32-inch.	3/64-inch.
641.5	1/32-inch.	3/16-inch.	3/64-inch.
709.5	1/32-inch.	13/64-inch.	3/64-inch.
776	....	7/32 inch.	3/64-inch.
846.5	....	Failed.	....

When deflection equals 7/32-inch a very slight sign of buckling inward occurred near the center.

TEST No. 3.

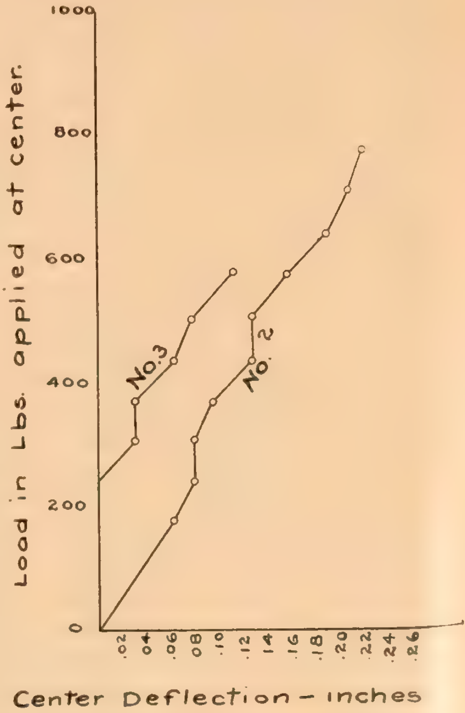
Load Lbs.	Deflection.		
	Left.	Center.	Right.
179	....	....	....
244	....	....	....
308.5	1/64-inch.	1/32-inch.	....
373.5	1/64-inch.	1/32-inch.	....
440.5	1/64-inch.	1/16-inch.	....
511	1/64-inch.	5/64-inch.	....
581	3/32-inch.	7/64-inch.	1/16-inch.
646.5	....	Failed.	....

Test No. 1—No. 15 B. & S. Gauge.

Test No. 2—No. 15 B. & S Gauge.

Test No. 3—No. 12 B. & S Gauge.

Test pieces No. 1 and No. 3 were annealed before rolling to shape, which accounts for their low point of failure.



REPORT OF THE GUNPOWDER SUPPLY IMPROVEMENT DIVISION

BALTIMORE, December 31, 1913.

EZRA B. WHITMAN, ESQ.,
Water Engineer,
City Hall.

DEAR SIR—Herewith is submitted a report of the operations of this Division during the past year:

Office Force.

The office force prepared plans and specifications, etc., as follows:

Design for stadia rod.

Plan for blow-offs on new steel conduit at Loch Raven.

Eight supplementary plans, showing changes in and details of new Loch Raven Dam (Contract No. 1).

Plans and specifications for construction of Providence road, connecting Road No. 1 with Providence.

Plans and specifications for lining the Loch Raven end of the Gunpowder Tunnel.

Plan for register house for Venturi meter on new conduit.

Plans and specifications for masonry for Bridge No. 2.

Supplementary plans for masonry of Bridge No. 2, on lines recommended by Mr. J. E. Greiner, who was retained as consulting engineer.

Plans for storm water drains at keeper's house, Loch Raven Dam.

Plans and specifications for distribution mains between Filtered Water Reservoir and Clifton Gate House.

Plans and specifications for large valves to be placed in connection with distribution mains.

Property plats.

Various minor plans, sketches and studies.

Field Work.

Field work included property surveys of ten parcels of land in the Gunpowder Valley, aggregating 495.7 acres of land; outline surveys of 349 acres of woodland and topographical surveys covering 518 acres of city property.

Surveys were also made for the Providence road, for Road No. 3, for Road No. 4, for changes in Merryman Mill road, and for tentative location of future road west of Bridge No. 2.

Clearing Reservoir Site.

In January a force of men was put to work at clearing the reservoir site below elevation 200, and at this date the work has been carried to a point about 5,000 feet below the Merryman Mill Dam. Many large trees overhung the river bank and the removal of these has been tedious and expensive. The clearing should be completed early in the year, when there will remain the burning of smaller stuff and trash and removal of muck, where below the flow line, to make the basin ready for submergence.

Contract No. 1—New Loch Raven Dam.

Work on the construction of the new Loch Raven dam has gone forward with few interruptions due to high water throughout the year.

The west cofferdam was flooded on March 28, causing one of the derricks to settle, but aside from a few days delay in the work, the construction was uninjured. In April the work was again flooded, but without damage other than delay.

The east cofferdam was completed in May, but owing to defects in the construction of the west bulkhead of the cofferdam, permitting excessive leakage, the contractors were unable to unwater the pit. This bulkhead was constructed on the apron of the new dam by placing clay and other material between parallel walls of two-inch plank, tied together by wire rope and supported on the outside by large stones placed with the derricks. The leakage occurred between the filling and the concrete apron and was probably due to use of poor material or carelessness in placing, or both. After various attempts had been made to stop the leaks by puddling, grouting, etc., the contractors built a concrete wall on the inside of the cofferdam, against the bulkhead, which accomplished the desired end.

On August 6 Resident Engineer J. T. Todd resigned to accept the position of superintendent of construction for the contractors; on the dam and under his management the progress of the work has been very satisfactory. Mr. E. L. Pattison was made resident engineer on the dam in Mr. Todd's place.

On November 15 a slide occurred at the east end of the excavation, bringing down into the pit from the hillside about 2,500 cubic yards of material, mostly rock; the removal of this material has delayed the construction and necessitated the replacement of two derricks and a part of the contractor's trestle. Fortunately, the conditions were such that the slide was anticipated in time to enable the contractors to take certain precautions looking to the safety of their men and plant, and no one was injured.

The gate house has been completed up to floor level (elevation 202.0), and sluice gates are in place. The chambers will be floored over and the gate stands will be placed in position probably by March 1, 1914.

The spillway section has been completed for a length of 54.0 feet and brought up to elevation 183.0 for a length of 160.0 feet.

The west shore section is rapidly nearing completion, and with good weather, should be finished in February.

At the east end the cut-off trench and foundation pit is being excavated between the end of the dam and a point 144 feet east of the center of the spillway, to which point all masonry lying below elevation 167.0 is in place.

During the year 1913, 32,659 cubic yards of rock and earth were excavated and 38,501 cubic yards of concrete were placed, which, with work previously done and other items of construction, make the total value of the work done to date $371,039.50.

With not too unfavorable conditions through the winter we should be in a position to close the relief openings in the dam and begin to impound water some time in April.

Contract No. 2—Masonry for Bridge No. 1.

This contract was completed by Messrs. Williams and Straus, subcontractors to the Singer-Pentz Company, on July 3. The work presents a very pleasing and substantial appearance, and the contractors are to be commended on the results secured.

The value of the contract was $25,701.52.

Contract No. 3—Steel Pipe Conduit.

With the exception of some little smoothing up and patching of the invert of the lining, the conduit has been completed.

This contract was prosecuted by Mason, Hilton & Co., the contractors, in a systematic and workmanlike manner, that deserves commendation, and with the exception above noted, the construction has been entirely satisfactory.

The lining was placed by the New York Cement Gun Company, sub-contractors, by means of the "cement gun." In "shooting in" the invert proper, precautions were not taken to dispose of the "rebound" or loose grains of sand, which rebound from the steel and which at many points created pockets of sand in the lining; also the workmen were allowed to walk over the invert before the cement had taken its set, so that patching and grouting is necessary at these points. The arch presents a very fair appearance. The value of the contract was $157,559.90.

Contract No. 5—Venturi Meter.

Contract for this meter was awarded to the Builders Iron Foundry of Providence, R. I., on their bid of $5,420.

The meter tube was placed by Mason, Hilton & Co., in connection with the construction of the conduit, and the recording and registering apparatus will be installed by the contractors on notification from this office to do so.

As we cannot use the conduit until the lining is placed in the Gunpowder Tunnel this fall, the Foundry has been requested to delay the installation of the recording and registering apparatus until a later date. This work can be done within two weeks and is not affected by weather conditions.

Contract No. 6—Superstructure Bridge No. 1.

This contract was awarded to the Roanoke Bridge Company on March 12, at their bid of $50,915.

In July the contractors had a small force in the field excavating for anchorage for the cables upon which the falsework trusses are to be erected. Excavation and drilling of holes for eye-bar anchors was completed in November, and the twelve cables on which the false work trusses are to rest were stretched across the valley between abutments. At this date all of the steel and lumber has been delivered on the ground, and about 50 per cent. of the falsework bents have been erected. We estimate that the falsework will be completed about February 10.

A careful inspection of the steel work disclosed a number of loose rivets, badly matched holes, and other minor defects in workmanship, which must be corrected before the steel is lifted to the falsework, but as yet no attempt has been made to remedy these.

Progress on this work has been far from satisfactory, due, the contractors claim, to trouble in securing labor and unforseen diffialties in reaching a character of rock that would be suitable for their cable anchorages. There is some foundation for both of these claims, but notwithstanding, it is the opinion of the writer that work should have been done in a much shorter time.

Judging by past performance, this bridge will not be completed before May 1, 1914, at the earliest, though the contractors' time expired in November.

Contract No. 7—Road No. 1.

This contract for the construction of about 1.9 miles of new road along the west side of the Loch Raven Valley was awarded to Thomas Mullan on April 30, 1913, at his bid of $47,649.50.

On June 11 ground was broken by the steam shovel at Station 51, just north of the new Loch Raven dam. At this date the shovel has advanced to the west abutment of Bridge No. 1, taking out the full width of roadway, except where in very heavy cuts, and has taken out the full width on its return, for a distance of about 1,000 feet.

A supplementary contract has been entered into with Mr. Mullan for the construction of the Providence road, about 1,800 feet in length. This road wiil connect the Lake Drive with Providence and Towson, and will be the most direct route to Towson from Bridge No. 1.

In order to allow embankments along the new road to settle before placing the macadam thereon, and with the approval of the county roads engineer, Mr. William G. Sucro, it was agreed that the contractor should place no macadam until spring, and the time of completion of Road No. 1 and the Providence road was extended to forty working days after April 1, 1914.

All culverts have been completed, and about 24,000 cubic yards of material have been excavated, at a cost of $22,525.18.

Contract No. 8—Sluice Gates for New Loch Raven Dam.

This contract was awarded to the Coffin Valve Company of Boston, Mass., on February 19, 1913, at their bid of $3,246, covering four 42 by 72 inch gates, two 48-inch diameter gates and four 24-inch diameter gates, together with stems, guides and stands.

These gates are to be placed by the King-Ganey Contracting Company, under Contract No. 1, and all have been placed except one of the 48-inch gates, which closes the east sluiceway of the dam not yet completed.

Contract No 10—Forty-eight Inch Gate Valves.

This contract was awarded to the Coffin Valve Company of Boston, Mass., on March 5, 1913, at their bid of $1,620, for two gates.

The gates were delivered several months since, but have not as yet been put in position on the sluices through the dam, which work is to be done by the King-Ganey Contracting Company under Contract No. 1.

Contract No. 15—Superstructure Bridge No. 2.

The contract for this bridge, consisting of three 207-foot through riveted truss spans and two 27-foot approach spans, designed in the office of Mr. J. E. Greiner, consulting engineer, was awarded to the McClintic-Marshall Company of Philadelphia, Pa., on September 17, 1913, at their bid of $86,750.

At this date shop drawings have been approved by Mr. Greiner, and orders have been placed with mills for materials.

Contract No. 16—Masonry, Bridge No 2.

This contract was awarded to Stewart-Jones Company and Claiborne-Johnston Company of Baltimore, on June 11, 1913, at their bid of $24,785. Subsequent to this award, certain changes were made in the designs, on recommendation of Mr. J. E. Greiner, who was called in as consulting engineer, which added materially to the unit cost of the concrete in place. To cover this additional cost, an agreement was entered into with the contractors by which their original price of $8.90 per cubic yard for concrete was increased to $10.50 per cubic yard.

This work has gone forward in a very satisfactory manner, and with very creditable results. At this date the west abutment and Piers Nos. 1, 2 and 3 have been completed; the east abutment is well under way, and the foundation pit for Pier No. 4 is about ready for concrete.

One thousand three hundred and fifty-five cubic yards of material have been excavated and 2,116 cubic yards of concrete have been placed; the value of the work done being $25,565.14.

Contract No. 17—Distribution Mains.

This contract for distribution mains extending from the filtered water reservoir now under construction, to Clifton gate house and including a branch line 1,700 linear feet long extending down Harford avenue to the Baltimore and Ohio Railroad, was awarded to the Lock Joint Pipe Company of New York on December 31, 1913, at their bid of $225,924.97, for reinforced concrete pipe. The lowest bid for steel pipe, submitted by the same Company, was $352,539.04, a difference of $127,000 in favor of concrete pipe.

This Company has made numerous tests of concrete pipe under pressures greatly exceeding the pressure to be sustained by the pipe to be laid under this contract and has also designed a joint which should satisfactorily take care of contraction and settlement.

The tests above mentioned confirmed results secured by this Department in similar tests made in 1912, and demonstrated the entire practicability of constructing a reinforced concrete pipe capable of sustaining internal pressure of 50 pounds or more without leakage; while the bids submitted indicate a very considerable saving in this type of construction over steel pipe.

Contract No. 24—Road No. 3.

This contract was awarded to Thomas Mullan on September 24, 1913, at his bid of $31,566.91 for a concrete surface 14 feet in width.

A small amount of grading has been done and crusher plant has been installed at the Department quarry on the property purchased from Rose Keech.

On January 13, 1913, the operation of the purification plants was turned over to the County Division and since that date this work has been done under the direction of Mr. Benthall.

In April several conferences were held with the County Commissioners and other interested parties in connection with the location of the proposed roads and bridges, resulting in an agreement on the part of the city to construct an additional bridge across the proposed lake at a point about 4,400 feet above Meredith's Ford Bridge, and to connect this bridge on the east with the Jarrettsville Turnpike near Mann's gate and the Dulaney Valley Turnpike near Dulaney Valley Postoffice, and on the west with the Merryman's Mill road, thus giving an outlet to Towson for traffic using these turnpikes after the Meredith's Ford Bridge is removed. This bridge is known as Bridge No. 2, and will be about 954 feet long over all.

In October an inspection was made of the lower end of the Gunpowder Tunnel, which will be under pressure when improvements are completed. This portion of the tunnel is through gneiss rock of a very satisfactory character and is unlined except for short sections at varying intervals. Test pits will be sunk at low points along the line to determine the depth and character of cover and unless these show insufficient cover, a small amount of grouting in the lined sections will serve to make this portion of the tunnel safe under the increased pressure.

One fatality occurred on the contract work. On July 27 an Italian employed by the King-Ganey Contracting Company was crushed to death by a dump car which he was attempting to unload and which fell back on him.

One man had his arm badly crushed in the gears of a hoisting engine.

Sanitary conditions have been good throughout the year and there has been no disorder in any of the various camps.

Yours very truly,

EMORY SUDLER, *Division Engineer.*

BALTIMORE CITY WATER DEPARTMENT—GUNPOWDER SUPPLY IMPROVEMENT DIVISION.

Average Daily Flow of Gunpowder Falls at Loch Raven—By Months, in Order of Their Dryness.

Year.	Millions of Gallons per Twenty-four Hours.												Totals.	Average
1883......	91^{8}	105^{9}	135^{11}	145^{12}	163^{10}	173^{1}	177^{7}	185^{5}	215^{4}	246^{3}	254^{6}	412^{2}	2,301	192
1884......	115^{9}	129^{10}	166^{8}	185^{11}	209^{1}	263^{12}	284^{5}	307^{7}	338^{6}	413^{4}	598^{3}	617^{2}	3,624	302
1885......	99^{8}	106^{7}	150^{6}	210^{5}	236^{4}	284^{12}	286^{1}	294^{3}	296^{11}	332^{10}	457^{2}	488^{9}	3,238	270
1886......	130^{10}	164^{9}	186^{12}	198^{11}	286^{8}	394^{6}	403^{7}	408^{3}	450^{1}	616^{2}	628^{4}	667^{5}	4,530	378
1887......	144^{11}	149^{10}	161^{9}	194^{12}	223^{7}	246^{1}	252^{8}	259^{6}	262^{4}	263^{5}	320^{2}	339^{3}	2,812	234
1888......	169^{8}	191^{7}	205^{10}	209^{6}	236^{1}	272^{5}	310^{11}	339^{9}	344^{4}	347^{12}	399^{3}	406^{2}	3,427	286
1889......	290^{2}	375^{1}	418^{10}	439^{12}	454^{5}	485^{8}	550^{4}	563^{9}	671^{3}	679^{6}	730^{11}	944^{7}	6,598	550
1890......	213^{7}	255^{11}	273^{12}	307^{10}	318^{9}	320^{6}	341^{8}	379^{4}	384^{1}	457^{3}	483^{2}	525^{5}	4,255	355
1891......	222^{11}	243^{10}	275^{12}	330^{9}	355^{8}	400^{5}	423^{6}	510^{2}	521^{1}	564^{4}	608^{3}	647^{7}	5,098	425
1892......	145^{10}	204^{9}	213^{12}	215^{11}	303^{2}	316^{6}	339^{8}	359^{7}	425^{1}	459^{5}	477^{4}	553^{3}	4,008	334
1893......	141^{8}	164^{9}	166^{7}	208^{12}	210^{10}	253^{11}	270^{6}	270^{1}	292^{4}	371^{3}	394^{2}	458^{5}	3,197	266
1894......	141^{8}	158^{1}	214^{11}	215^{2}	230^{7}	238^{12}	239^{10}	240^{3}	263^{6}	271^{9}	318^{4}	466^{5}	2,993	249
1895......	120^{8}	142^{10}	162^{11}	176^{9}	186^{2}	198^{12}	212^{7}	258^{6}	321^{3}	347^{5}	389^{1}	420^{4}	2,931	244
1896......	85^{8}	110^{10}	113^{9}	124^{12}	154^{11}	177^{1}	204^{5}	207^{6}	272^{7}	287^{4}	366^{2}	403^{3}	2,502	209
1897......	105^{10}	110^{9}	125^{1}	160^{3}	188^{6}	195^{4}	237^{7}	238^{8}	281^{12}	302^{11}	310^{5}	675^{2}	2,926	244
1898......	150^{10}	164^{9}	167^{6}	230^{11}	236^{3}	237^{2}	247^{4}	286^{7}	290^{1}	316^{12}	330^{5}	446^{8}	3,099	258
1899......	130^{7}	134^{8}	135^{12}	137^{10}	172^{6}	194^{11}	242^{9}	277^{1}	278^{5}	384^{4}	456^{2}	568^{3}	3,107	259
1900......	70^{9}	75^{10}	75^{12}	98^{11}	110^{7}	137^{8}	149^{1}	185^{6}	187^{5}	215^{4}	252^{2}	315^{3}	1,868	156
1901......	95^{2}	121^{6}	122^{10}	126^{1}	136^{9}	147^{11}	151^{7}	155^{5}	195^{3}	210^{4}	279^{8}	515^{12}	2,252	188
1902......	91^{8}	153^{7}	181^{11}	183^{9}	212^{6}	244^{5}	279^{10}	323^{1}	381^{4}	457^{12}	475^{3}	507^{2}	3,486	290
1903......	177^{11}	230^{9}	235^{12}	239^{10}	305^{8}	341^{7}	362^{5}	434^{2}	502^{6}	542^{3}	576^{4}	725^{1}	4,668	389
1904......	109^{8}	121^{11}	124^{12}	132^{9}	134^{6}	135^{5}	137^{10}	151^{7}	180^{4}	260^{1}	335^{3}	377^{2}	2,195	183
1905......	173^{11}	182^{2}	222^{9}	223^{5}	226^{10}	298^{6}	300^{12}	328^{8}	351^{4}	363^{7}	423^{1}	605^{3}	3,694	308
1906......	164^{9}	212^{11}	276^{7}	278^{12}	279^{10}	282^{1}	290^{6}	299^{8}	328^{5}	344^{2}	440^{3}	586^{4}	3,778	315
1907......	225^{8}	250^{10}	276^{5}	280^{4}	304^{7}	314^{9}	315^{6}	370^{2}	382^{11}	410^{1}	518^{12}	572^{3}	4,216	351
1908......	156^{11}	177^{9}	178^{12}	206^{10}	222^{6}	231^{8}	333^{7}	357^{4}	444^{5}	506^{3}	540^{1}	815^{2}	4,165	347
1909......	79^{10}	80^{11}	98^{8}	110^{9}	119^{12}	134^{7}	161^{1}	279^{5}	288^{2}	312^{6}	314^{4}	637^{3}	2,611	218
1910......	54^{9}	55^{10}	64^{8}	65^{11}	73^{12}	83^{7}	174^{5}	204^{6}	204^{3}	280^{4}	427^{1}	451^{2}	2,134	178
1911......	80^{6}	88^{5}	104^{7}	116^{3}	126^{2}	134^{1}	146^{4}	153^{10}	199^{11}	208^{9}	252^{12}	359^{8}	1,964	164
1912......	117^{10}	148^{11}	172^{8}	207^{9}	222^{12}	244^{6}	253^{1}	284^{5}	299^{7}	388^{4}	449^{2}	630^{3}	3,413	284
1913......	101^{9}	148^{11}	156^{8}	165^{12}	165^{7}	185^{10}	200^{2}	244^{1}	265^{6}	357^{5}	483^{3}	546^{4}	3,015	252

NOTE—Small figures to the right of the quantities denote the month of the year.

REPORT OF AUDITING DIVISION

BALTIMORE, December 31, 1913.

MR. EZRA B. WHITMAN,
Water Engineer.

DEAR SIR—I submit herewith the report of the Auditing Division for the year ending on the above date.

During the year this Division has been engaged in keeping the books of the Department, showing its accounts with outside parties and other departments of the city government, in keeping a record of all receipts and disbursements, in making up pay-rolls and paying off all employes, in ordering all materials, taking all inventories and keeping stock ledgers, in keeping a record of all work done on shop orders, checking and comparing all bills, drawing up all warrants and keeping a record of rents, insurance, etc.

Careful attention has been paid during the year to the placing of all orders for supplies required for the Department not covered by contract; competitive prices being always obtained except for small emergency orders.

Good results were again obtained from the system of accounts installed in 1900, the difference between the inventory of the Mechanical Division and the stock ledgers being $187.33 out of a total stock of $98,343.87, while the Construction Division inventory shows a difference of $3.96 out of a total stock of $6,189.42.

Four thousand and sixty-seven orders for materials were placed during the year, as against three thousand five hundred and eighty for 1912.

I present herewith the annual statements showing the assets and liabilities of the Department, the gross receipts and total disbursements, and disbursements from each of the ten appropriation accounts.

I again take pleasure in commending the work of the employes of this Division for the able, intelligent and conscientious manner in which they have performed their respective duties and their cheerful response to every request I have made of them.

Respectfully yours,

CHAS. W. NAGLE, *Auditor*

STATEMENT OF RECEIPTS AND DISBURSEMENTS FOR 1913

RECEIPTS.

Amount received from water rents	$831,553 82	
Less returned	3,958 43	
		$827,595 39
Meter rents		569,669 69
Plumbing bills		72,492 41
Meter plumbing bills		7,099 52
Interest		1,899 89
Turn-offs		280 50
Vacancies		513 00
Sales, old materials, rents, etc		9,494 25
		$1,489,044 65

DISBURSEMENTS.

Water Engineer's Department:		
Expenses	$535,205 46	
Meters	1,272 59	
Salaries	101,293 47	
Collector of Water Rents and Licenses:		
Expenses	2,034 43	
Salaries	29,836 67	
Interest	415,000 00	
Sinking funds	21,614 43	
		1,106,257 05
Surplus to general treasury		$382,787 60

STATEMENT OF ASSETS AND LIABILITIES TO DECEMBER 31, 1913.

Assets.	Accounts Receivable.	Tools and Machinery.	Furniture and Fixtures.	Horses and Wagons.	Mains Laid.	Land, Construction and Real Estate.	Sinking Funds.	Stock on Hand, Dec. 31, 1913.
Water Board	$191,065 18	$144,387 70	$1,093 46	$579 40	$5,531,876 92		$5,109,682 61	$51 50
Engineering Division		4,281 76	4,258 94					544 85
Lake Montebello		1,516 70	215 33	1,061 30		$1,149,648 07		
Lake Clifton		6,132 60				729,832 63		
Mt. Royal Reservoir		38 05				133,162 35		
Druid Lake		8,965 34	22 00	283 50		1,334,573 92		
Hampden Reservoir		191 65				226,043 53		
Western High Service Reservoir		40 50				112,518 57		
Guilford Reservoir		57 90	2 00			165,560 74		
Harper's Waste Weir		26 00						
Dredge "Julia"		101,306 60						
Loch Raven		5,773 93		3,071 05		882,278 83		
New Loch Raven Dam						674,404 24		
Water Shed Patrol			43 70	310 00				
Gunpowder Conduit						1,779,610 24		
Lake Roland		453 34	49 75	476 50		379,217 51		
Jones Falls Conduit						569,043 35		
West Arlington Standpipe		84 12				42,167 74		
Ashburton Lake		13 88	31 36			751,873 22		
Old City Hall						30,524 61		
Construction Division		13,997 23	4,043 72	15,498 17				6,189 42
Western Pumping Station		78,129 82	252 87	309 40		53,577 00		
Eastern Pumping Station		87,445 00	338 77			88,860 82		
Stable						15,368 46		
Machine Shop		30,419 83	109 44			39,794 53		
Storehouse		255 01	993 53			30,755 15		
Meter Testing Room								
Mt. Royal Pumping Station		306,831 84	1,478 08			240,891 00		
Mechanical Division		13,985 88	1,569 88	1,734 85				98,616 60
Auditing Division			2,077 33					25 00
Roland Standpipe		306 63				52,712 38		
Blacksmith Shop						1,141 48		
Gunpowder Supply Improvement Division		6,097 45	1,950 07	4,331 07		293,747 78		67 75
Filtration Division		1,044 80	877 84			232,340 08		
County Division				627 80				
Total Accounts Receivable	$191,065 18							
Total Tools and Machinery	811,783 56	$811,783 56						
Total Furniture and Fixtures	19,408 07		$19,408 07					
Total Horses and Wagons	28,283 04			$28,283 04				
Total Mains Laid	5,531,876 92				$5,531,876 92			
Total Land, Construction and Real Estate	10,009,648 23					$10,009,648 23		
Total Sinking Funds	5,109,682 61						$5,109,682 61	
Total Stock on Hand	105,495 12							$105,495 12
Total Assets	$21,807,242 73							

Liabilities.	Accounts Payable.	Loans.
Water Board	$41,341 56	$12,600,000 00
Total Accounts Payable	$41,341 56	
Total Loans	12,600,000 00	$12,600,000 00
Total Liabilities	$12,641,341 56	

Total Assets	$21,807,242 73
Total Liabilities	12,641,341 56
Excess Assets Over Liabilities	$9,165,901 17

SUMMARY OF DISBURSEMENTS AND RECEIPTS FOR 1913.

Items.	DISBURSEMENTS.												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.
Books, Stationery and Printing	$140 98	$355 21	$171 69	$40 73	$122 15	$314 76	$225 00	$193 25		$706 51			$2,270 28
Drawing Materials	9 00	12 36		7 45	4 30	57 21				107 26			197 58
Furniture and Fixtures	57 25	35 00	95 96	199 05	144 50	450 01	282 24	503 58		541 01	$98 00		2,406 60
Fuel	3,034 92	182 25	8,750 11	1,144 97	8,778 54	2,882 93	161 25	3,461 21	$743 52	13,843 89	2,969 93		45,953 52
Labor	24,655 22	18,765 68	18,686 80	19,959 25	28,216 83	22,978 48	22,678 01	32,123 15	29,695 21	43,250 22	32,143 49		308,114 13
Hauling	588 27		397 20				6 25	12 00		1,615 72			2,619 44
Lime and Alum	88 43	1,803 22	4,862 49	58 56	4,100 97		3,557 05	2,699 40		12,242 03			29,412 15
Tools and Machinery													
Cast-Iron Pipe	2,013 09		3,681 30				11,497 62	1,438 12	4,752 87	11,998 17			35,381 17
Cast-Iron Pipe Fittings	302 36	281 51	863 68	292 03	853 20	685 83	584 10	698 76	813 73	736 12	781 50		6,892 82
Special Iron Castings	172 34	783 18	536 73	1,388 79	1,266 78	1,628 08		846 18	1,164 74	1,510 53	1,127 75		10,425 10
Valves	106 00		810 00	700 00	123 00	254 00							1,993 00
Wrought-Iron Pipe and Fittings	106 64	62 51	89 00	115 71	82 59	69 09	77 34			694 89			1,297 77
Service Pipe	42 72	267 38	520 34	626 65	791 23			185 02		4,593 43			7,026 77
Brass Service Pipe Connections	82 30	242 28			2,446 21		60 00			1,831 42			4,662 21
Brass Castings		334 08		82 20	23 08	1,263 04				2,785 86	1,544 40		6,032 66
Bar Iron and Steel	15 93	79 69	268 04	427 74	98 82	34 97	43 29	24 83	65 11	228 08	71 80		1,358 30
Meters	841 68	970 30	764 55	490 50	445 37	683 57	138 59	956 57		1,563 81			8,372 11
Lead					841 92					1,525 21			2,367 13
Lumber	40 84	176 11		217 38	472 97	321 88	90 21	108 64		2,564 76			3,992 79
Rope and Packing	118 47	86 54	218 71	1 50	100 52	168 01	23 18	80 50		201 82			999 25
Grease, Paints, Oils and Waste	104 71	640 72	200 04	524 60	413 48	378 27	658 59	322 87	150 19	843 10	45 69		4,282 26
Rubber	236 20	140 60	89 72	153 90	72 85	24 60		205 01		716 87			1,639 75
Brick, Stone and Cement	23 25	204 91	17 50	99 00	81 91	136 36	165 24	99 92		168 81			996 90
Sand, Gravel and Ashes			18 20	16 40		30 90	13 50	25 00		7 00			111 00
City Engineer, Repaving		1,223 47	31 32	77 41	3,429 56	1,065 86	2 08	259 71	2,351 25	1,585 65	313 46		10,339 77
Feed	39 48	286 77	374 95	264 64	463 89		371 68	429 10		953 85			3,184 36
Insurance	51 03	436 60								570 44			1,058 07
Current Expenses	1,547 46	991 14	598 89	946 44	1,047 87	1,253 32	1,186 45	1,024 52	365 93	2,724 55	394 19	$1 67	12,082 43
Miscellaneous and Emergencies	2,457 27	2,626 91	4,685 79	1,789 53	3,063 11	3,825 29	5,172 70	1,445 48	208 13	3,927 59	815 71	6 85	30,024 36
Salaries	8,048 73	8,352 64	8,523 09	8,464 99	8,510 00	8,469 01	8,499 99	12,727 52	4,242 46	12,727 51	8,485 02	4,242 51	101,293 47
Extension of Water System	47,395 29	55,432 03	52,068 97	32,265 18	57,198 12	42,615 91	61,613 43	87,137 05	77,745 59	98,484 02	90,355 47	114,998 78	817,309 84
New Pumps and Boilers, Mt. Royal Pump. Station.	11,646 03	1,186 25	1,677 06	11,480 46	29,732 15	2,408 75	665 96	396 38	857 38	671 28	18,161 35	2,664 16	81,547 21
Work Done in Advance of Improved Paving	4,389 15	9,334 67	13,194 90	12,897 79	8,119 55	9,811 54	19,537 81	15,427 05				55,119 55	147,832 01
Gunpowder Supply Improvement Division, Salaries	1,995 83	4,314 17	4,221 84	4,284 16	4,458 49	4,438 51	4,588 33	6,547 04	2,000 83	6,002 49	4,029 67	2,037 09	48,918 45
Filtration Division, Salaries	886 67	1,773 33	1,773 33	1,773 33	1,735 83	1,796 54	1,913 33	2,764 26	899 17	2,875 34	2,002 34	951 69	21,145 16
Pitometer Survey for Underground Leaks		50 00	100 00	100 00	352 38	491 22	604 72	910 10	923 25	1,202 27	555 69	182 83	5,472 46
Cleaning Mains										50 53	167 42	183 52	401 47
Repairs to Pumping Stations										2,551 67		1,426 22	3,977 89
Totals	$111,237 54	$111,431 51	$128,292 20	$108,890 34	$167,592 17	$108,537 94	$144,417 94	$173,052 22	$126,979 36	$238,603 71	$164,062 88	$198,293 83	$1,773,391 64

Total Disbursements			$1,773,391 64
Credit—			
Salaries	$43 33		
Extension of Water System	2,683 88		
Pitometer Survey	472 46		
		3,199 67	
Net Disbursements			$1,770,191 97

RECEIPTS.

Items	January	February	March	April	May	June	July	August	September	October	November	December	Totals
[illegible] Division													
[illegible] Installed	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$3,152 00	$3,744 00	$[illegible]	$3,731 00	$[illegible]	$[illegible]	$32,262 00
Meter [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	440 65	[illegible]	382 73	936 21	[illegible]
Repairs	[illegible]	[illegible]	[illegible]	[illegible]	4,162 52	[illegible]	[illegible]	2,266 44	[illegible]	[illegible]	[illegible]	82 00	[illegible]
Department Miscellaneous		[illegible]	[illegible]	611 84		[illegible]			[illegible]			[illegible]	[illegible]
Total	$[illegible]	$[illegible]	$[illegible]	$6,746 17	$6,961 71	$[illegible]	$6,289 79	$[illegible]	$[illegible]	$8,653 67	$[illegible]	$3,612 71	$[illegible]
Maintenance Division													
[illegible]	$[illegible]			$[illegible]	$[illegible]				$1,813 04			$708 00	$[illegible]
[illegible]													
[illegible]				[illegible]	4 14	$82 13			[illegible]			[illegible]	[illegible]
[illegible]				[illegible]									[illegible]
Miscellaneous	[illegible]	$[illegible]	$[illegible]	[illegible]	10 00	10 00			[illegible]			[illegible]	[illegible]
Total	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$92 43			$[illegible]			$1,151 77	$[illegible]
[illegible]													
[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$54 37			$85 24			$[illegible]	$[illegible]
[illegible]						[illegible]							[illegible]
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]				[illegible]			5 00	[illegible]
Miscellaneous		[illegible]	[illegible]	[illegible]	[illegible]				189 78			1,126 82	1,754 73
[illegible]	[illegible]		[illegible]			[illegible]							[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	179 00	[illegible]	32 50			[illegible]			214 00	[illegible]
Total	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]			$[illegible]			$[illegible]	$[illegible]
Grand Total	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$85,070 16

STATEMENT OF EXPENDITURES FOR 1911

Months	Meters	Salaries	Extension of Water System Under the Act	New Pumps and Boilers Mt. Royal Pumping Station	Work Done in Advance of Improved Paving	G. S. [illegible] Division Salaries	Filtration Division Salaries	Pitometer Survey for Underground Leaks	Cleaning Mains	Repairs to Pumping Stations
January	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]			
February	[illegible]	[illegible]	[illegible]	1,186 25	[illegible]	[illegible]	[illegible]	$[illegible]		
March	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100 00		
April	190 50	[illegible]	[illegible]	11,480 46	[illegible]	[illegible]	[illegible]	100 00		
May	115 37	8,510 00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
June	[illegible]	8,469 01	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
July	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
August	[illegible]	[illegible]	[illegible]	396 38	[illegible]	[illegible]	[illegible]	[illegible]		
September		[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]		
October	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	$[illegible]	$[illegible] 67
November		[illegible]	90,355 47	18,161 35		[illegible]	[illegible]	[illegible]	[illegible]	
December	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] 22
Totals	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]
Credits		[illegible]	[illegible]					[illegible]		
Net Totals	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible] 000 00	$[illegible]	$[illegible]

CHARGED TO WATER ENGINEER'S DEPARTMENT

Months	Books [illegible] Printing	Drawing Materials	[illegible] Fixtures	[illegible]	[illegible]	Hauling	Tools and Machinery.	Cast Iron Pipe.	Cast Iron Pipe Fittings	Special Iron Castings	Valves	Wrought Iron Pipe and Fittings	Service Pipe	Brass Service Pipe Connections	Brass Castings	Bar Iron and Steel	[illegible]	Lumber	Repairs and Packing	[illegible] Paint and Oil	[illegible]	Brick Stone and Cement	Sand Gravel and Ashes	Fuel	[illegible]	[illegible]	Miscellaneous [illegible]	City [illegible]	[illegible] and [illegible]	Totals
January	$110 98	$9 00	$57 25	$1,034 92	$[illegible]	$[illegible]		$[illegible]	$[illegible]	$172 34	$[illegible]	$[illegible]	$42 72	$[illegible]		$[illegible]		$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]		$[illegible]	[illegible]	$1,617 46	$2,457 27		$[illegible]	$[illegible]
February	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				281 51	[illegible]	....	[illegible]	[illegible]	[illegible]	$[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	2,626 91	$[illegible]	[illegible]	[illegible] 12
March	171 69		[illegible]	8,750 11	18,686 50	[illegible]		[illegible]	[illegible]	536 73	810 00	89 00	520 34			[illegible]			218 71	200 01	89 72	[illegible]	$18	[illegible]		[illegible]	[illegible]	[illegible]	1,862 49	[illegible]
April	10 73	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]	700 00	[illegible]	626 65		[illegible]	[illegible]		[illegible]	1 50	624 60	[illegible]	[illegible]	[illegible]	[illegible]	....	[illegible]	[illegible]	77 11	[illegible]	[illegible]
May	122 15	[illegible]	[illegible]	[illegible]	[illegible]				853 20	1,266 78	[illegible]	[illegible]	[illegible]	2,446 21	23 08	[illegible]	$81	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]	....	[illegible]	3,063 11	[illegible]	[illegible]	[illegible]
June	[illegible]		150 01	[illegible]	[illegible]				[illegible]	[illegible]	[illegible]	[illegible]			1,263 04	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10 90			[illegible]	[illegible]	[illegible]		[illegible]
July	[illegible]		[illegible]	[illegible]	22,678 01	[illegible]		[illegible]	584 10			[illegible]		60 00		[illegible]		[illegible]	23 18	[illegible]		165 21	13 50	[illegible]		[illegible]	6,172 70	[illegible]	3,557 05	[illegible]
August	[illegible]		[illegible]	3,461 21	32,123 15	[illegible]		1,438 12	698 76	[illegible]			[illegible]			[illegible]		[illegible]	80 50	122 87	206 01	[illegible]	25 00	129 10		[illegible]	1,445 48	269 71	2,699 40	[illegible]
September				[illegible]	[illegible]			4,752 [illegible]	[illegible]	1,164 74						65 11				[illegible]						[illegible]	208 13	2,351 25		40,310 68
October	[illegible]	[illegible]	511 01	[illegible]	43,250 22	[illegible]		11,998 17	[illegible]	[illegible]		[illegible]	[illegible]	1,831 42	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	716 87	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3,927 69	[illegible]	[illegible]	112,474 79
November			[illegible]	2,969 93	32,143 49				781 50	1,127 75					1,544 40	[illegible]				45 69						[illegible]	[illegible]	[illegible]		40,305 92
December					[illegible]																					1 67	[illegible]			[illegible]
Total	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]		$35,381 17	$6,892 82	$[illegible]	$1,993 00	$1,297 77	$7,026 77	$4,662 21	$[illegible]	$1,358 30	$[illegible]	$[illegible]	$[illegible]	$4,282 26	$1,639 75	$996 90	$111 00	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$[illegible]	$29,112 15	$[illegible]
Meters																														1,272 59
																														$538,391 16

APPENDIX No. 4.

Report on Failure of Groined Arches.

November 6, 1913.

Mr. Ezra B. Whitman, *President of the Water Board,*
Baltimore, Md.

Dear Sir—In accordance with your letter of October 25, 1913, stating that a failure of some of the groined arches in the filtered water reservoirs now under construction at Lake Montebello, Baltimore, had taken place and that you desired me to visit Baltimore and to report on the safety and adequacy of the design of the groined arches, to advise as to whether any changes from the original designs were necessary, to examine the work as it now stands and give my opinion as to the cause of the failure, and to advise as to what portions of the groined arches and barrel arches still standing should be taken down before proceeding with the reconstruction of the work, I beg to state that I spent all of Tuesday, Wednesday and Thursday, October 28, 29 and 30, in Baltimore at Lake Montebello making a detailed examination of the work and securing data regarding the methods of construction.

As a result of this detailed examination and of my subsequent investigations and studies I have reached the following conclusions:

1. That the groined arches were well and carefully designed and if built of the materials and in accordance with the requirements specified are safe and suitable for the purpose for which they were designed.

2. That the design of the groined arches is in accord with what may be said to be practically standard practice in this class of work and is similar to that adopted in a large number of works already built and in service in the United States, among which may be mentioned those in Albany, N. Y.; Columbus, Ohio; Grand Rapids, Mich.; Minneapolis, Minn.; New Orleans, La.; Philadelphia, Pa.; Pittsburgh, Pa.; Providence, R. I.; Roland Park, Md.; Springfield, Mass.; and Washington, D. C.

3. That no changes in the design of the groined arches be made and that the work be constructed as originally contemplated.

4. That the failure was due to the premature loading of the barrel arches and groined arches with earth before provision had been made for taking up the thrust produced in the same by the earth loading.

Before discussing the question of what portions of the groined arches and barrel arches still standing should be taken down prior to proceeding with the work of reconstruction, as well as the question of the repair and reinforcement of certain portions of the work which felt the effect of the failure but which are in such condition that it may be possible to strengthen them and thereby avoid the necessity of having to take them down, it will be well to first consider the design and construction of the work and the failure and its cause.

Design.

The groined arches which fell were built as a portion of the two filtered water reservoirs now under construction at Lake Montebello, Baltimore. The drawings and specifications for the work are given in detail in Contract No. 4, a copy of which will be found in the Appendix.

The reservoirs are each 241 feet wide by 258 feet 6 inches long, measured on the neat lines, and have a total depth from the floor to the inside crown of the arches above of 20 feet. With a depth of water of 17 feet, each reservoir has a capacity of approximately 7¾ million gallons, making a total combined capacity for the two reservoirs of about 15½ million gallons.

The reservoirs are of the covered type, the covering consisting of groined-arch vaulting with earth filling above, and are being constructed of concrete—a portion only of which is reinforced.

The concrete floor has a total thickness of 8 inches and is laid in two layers each 4 inches in thickness, except near the outside walls where the layers are somewhat thicker. The concrete in the lower and upper layers is placed in blocks approximately 15 feet square.

The pier bases, on which the piers carrying the vaulting above rest, are 5 feet square, are reinforced with steel and set on the lower layer of the floor. The piers are 18 inches square and are 16 feet 2 inches in height from the top of the pier base to the springing line of the groined arches.

The dividing wall between the two reservoirs is of reinforced concrete, having a thickness at a point 17 feet above the floor—that is, at the springing line of the groined-arch vaulting—of 18 inches and a thickness of 2 feet 3 inches at the floor. The reinforcement extends well up above the top of the wall to a point about level with the inside crown of the groined arches.

The outside wall is of the arched type and is somewhat similar in section to that used for the walls of a large aqueduct or sewer and is designed to transmit the thrust through the arch and abutment section to the foundation below. The arch of the outside wall has a thickness of 6 inches at the crown where it abuts against the groined arches.

The groined arches have a clear span of 13 feet 6 inches from pier to pier and a rise of 3 feet. The thickness of the arch at the crown is 6 inches and over the pier 21 inches. The introdos of the arches are semi-elliptical and the extrodos parabolic. The depression over the pier, measured from a plane passing through the outside crowns of the arches, is 21 inches.

On the easterly side of the reservoirs the earth covering is to have a depth of 2 feet 3 inches above the outside crown of the arches and on the westerly side a depth of only 1 foot 9 inches.

An investigation has been made to determine the amount of thrust in the arches under different conditions of loading, from which it has been found that the compressive stresses in the concrete are within the limits which can be allowed on concrete of the character used in the construction of the work. Similarly, the loads on the piers and on the foundations are within safe limits.

Groined arches of the type being built at Baltimore have been used extensively in the United States in the last ten to fifteen years for covering reservoirs and slow sand filters. In Table 1 is given data regarding a large number of groined arches actually built, but no attempt has been made to make the table include all of the groined arches constructed in the United States. The table does, however, give data regarding the arches in many of the most important works in this country and Canada.

From an examination of the table it will be seen that in some of the largest works the arches have a longer clear span than those being built at Baltimore, and it will also be seen that in nearly every case the crown thickness is 6 inches—the same as that of the arches designed for the filtered water reservoirs at Baltimore. Where the groined arches have been called on to support a load greater than that of the ordinary earth covering the crown thickness has been increased and in some cases the concrete has been reinforced with steel. Under conditions similar to those at Baltimore, however, the groined arches have not been reinforced.

For the purposes of comparison, sections of the groined arches and outside walls of the filtered water reservoirs at Baltimore, of the filtered water reservoir at the Upper Roxborough filter plant in Philadelphia, of the slow sand filters at the Belmont filter plant in Philadelphia, of the covered reservoir at Roland Park, Baltimore; of the filtered water reservoir at Columbus, Ohio; and of the slow sand filters at Toronto, all drawn to the same scale, are shown respectively on Plates 3 to 8 inclusive.

From an examination of these plates it will be seen that the arch of the outside wall of the filtered water reservoir at Baltimore down to the abutment section is almost identical with that of the outside wall of the filtered water reservoir at the Upper Roxborough filter plant in Philadelphia. The two filtered water reservoirs at Baltimore have a total area of 2.78 acres, while the filtered water reservoir at the Upper Roxborough filter plant has an area of 1.74 acres.

Again, it will be seen that the groined arches of the filtered water reservoirs at Baltimore, with a clear span of 13 feet 6 inches and a crown thickness of 6 inches, are almost identical with those of the Belmont filters at Philadelphia, which have a clear span of 13 feet 5 inches and a crown thickness also of 6 inches. The total area of the Belmont filters having such arches is 13.32 acres, while at Baltimore the area is only 2.78 acres.

At Columbus, Ohio, there are two filtered reservoirs which are very similar to those being constructed at Baltimore. The reservoirs at Columbus have a total area of 2.16 acres, compared with a total area of 2.78 acres at Baltimore. The arch of the outside wall at Columbus is in general similar to that of the outside wall at Baltimore. The groined arches at Columbus have a clear span of 15 feet 2 inches, a rise of 3 feet 2 inches and a crown thickness of 6 inches, while those at Baltimore have a clear span of only 13 feet 6 inches, with a rise of 3 feet and a crown thickness of 6 inches.

TABLE 1—DATA RELATING TO GROINED ARCHES WHICH HAVE BEEN BUILT IN THE UNITED STATES AND CANADA.

Date Completed.	Location.	Structure.	Total Area in Acres.	Depth of Earth Cover.	Concrete Mixture.	Groined Arches.			Piers.	
						Span.	Rise.	Crown Thickness.	Size.	Depression Above.
1903	Yonkers, N. Y.	Filtered water reservoir	0.06	4′ 0″	1 : 2.9 : 5	10′ 0″	1′ 6″	6″	16¾″ x 16¾″	9¾″
1903	Watertown, N. Y.	Coagulating basin and reservoir	0.40	2′ 0″	1 : 2.9 : 5	10′ 0″	1′ 6″	6″	18″ x 18″	10″
1909	Providence, R. I	Filters	10.00	2′ 0″	1 : 2½ : 5	10′ 3″	2′ 6″	6″	20″ x 20″	15″
1903	Ithaca, N. Y.	Coagulating basin and filtered water reservoir	0.25	2′ 0″	1 : 2½ : 4½	10′ 6″	1′ 6″	6″	18″ x 18″	10¼″
1912	Grand Rapids, Mich	Filtered water reservoir under mechanical filters	0.22	None.	1 : 2 : 4	10′ 6″ x 10′ 4″	2′ 9″	9″	24″ x 24″	None.
1909	New Orleans, La	Filtered water reservoir	3.74	1′ 0″	1 : 2½ : 5½	10′ 8″	2′ 6″	6″	16″ x 16″	....
1907	Cincinnati, Ohio.	Supports under mechanical filters	1.05	None.	1 : 2½ : 5	11′ 0″ x 9′ 5⅔″	2′ 6″	8″	21″ x 21″	None.
1909	Springfield, Mass.	Filters	3.12	2′ 0″	1 : 3.1 : 5.3	11′ 4″	2′ 0″	6″	20″ x 20″	15″
1911	Toronto, Ont.	Filtered water reservoir	2.23	2′ 0″	1 : 2½ : 4½	11′ 4″	2′ 0″	6″	20″ x 20″	14″
1911	Toronto, Ont.	Filters	10.08	2′ 0″	1 : 2½ : 4½	11′ 4″	2′ 0″	6″	20″ x 20″	14″
1910*	Owen Sound, Ont.	Filters	0.49	....	....	11′ 6″	2′ 6″	6″	18″ x 18″	14″
1905	New Milford, N. J.	Filtered water reservoir under mechanical filters	0.25	None.	1 : 2½ : 5	11′ 8″ x 9′ 8″	2′ 6″	8″	24″ x 24″	None.
1903	Washington, D. C.	Filters	5.18	2′ 0″	1 : 3.1 : 5.3	11′ 10″	2′ 6″	6″	22″ x 22″	17″
1908	Columbus, Ohio.	Filtered water reservoir under mechanical filters	0.53	None.	1 : 2½ : 5½	11′ 10″ x 9′ 8″	2′ 6″	8″	24″ x 24″	None.
1913	Minneapolis, Minn.	Filtered water reservoir under mechanical filters	0.38	None.	1 : 2 : 4	11′ 10″ x 10′ 10½″	3′ 0″	9″	26″ x 26″	None.
1899	Albany, N. Y.	Filters	5.74	2′ 0″	1 : 3 : 5	11′ 11″	2′ 6″	6″	21″ x 21″	6″
1897	Wellesley, Mass.	Reservoir	0.12	2′ 0″	1 : 2½ : 4½	12′ 0″	2′ 6″	6″	24″ x 24″	None.
1900	Superior, Wis.	Filters and reservoirs	0.59	2′ 0″	1 : 3 : 5	12′ 0″	2′ 6″	6″	20″ x 20″	6″
1903	Brookline, Mass	Reservoir	1.4	1′ 9″	1 : 2 : 4	12′ 0″	2′ 6″	6″	20″ x 20″	None.
1910	Wilmington, Del.	Filtered water reservoir under final filters	2.11	None.	1 : 3 : 5	12′ 0″	3′ 0″	9″	24″ x 24″	None.
1905	Milford, N. J.	Filtered water reservoir under building	0.10	None.	1 : 2½ : 5	12′ 0″ x 11′ 8″	2′ 6″	8″	24″ x 24″	None.
1913*	Montreal, P. Q	Filtered water reservoir under pre filters	0.65	None.	1 : 2½ : 5	12′ 0″ x 10′ 3″	3′ 0″	8″	30″ x 30″	None.
1913*	Montreal, P. Q	Filtered water reservoir under future pre-filters	1.35	3′ 0″	1 : 2½ : 5	12′ 0″ x 10′ 3″	3′ 0″	8″	30″ x 30″	None.
1913*	Montreal, P. Q	Filtered water reservoir	0.23	3′ 0″	1 : 2½ : 5	12′ 0″ x 10′ 3″	3′ 0″	8″	30″ x 30″	21″
1913*	Montreal, P. Q	Supports under pre-filters	0.53	None.	1 : 2½ : 5	12′ 0″ x 10′ 3″	3′ 0″	9″	30″ x 30″	None.
1899	Clinton, Mass.	Reservoir	0.18	4′ 6″	1 : 2½ : 4	12′ 0⅞″	2′ 6″	12″	30″ x 30″ 24″ x 24″	None.
1903	Washington, D. C.	Filters	23.72	2′ 0″	1 : 3.1 : 5.3	12′ 2″	2′ 6″	6″	22″ x 22″	17″
1909	Yonkers, N. Y.	Filters	1.55	2′ 0″	1 : 3 : 5	12′ 2″	2′ 6″	6″	22″ x 22″	....
1899	Concord, Mass.	Reservoir	0.06	2′ 6″	1 : 2 : 5	12′ 9″	3′ 0″	6″	24″ x 24″	None.
1912	Roland Park, Md	Reservoir	0.34	2′ 0″	1 : 2½ : 5½	13′ 0″	2′ 8″	6″	20″ x 20″	18″
	Philadelphia, Pa.									
1907	Torresdale	Filters	16.50	2′ 0″	1 : 3 : 5	13′ 2″	3′ 0″	6″	22″ x 22″	21″
1907	Lawrence, Mass	Filters	0.74	3′ 0″	1 : 3 : 5	13′ 2″	2′ 9″	6″	22″ x 22″	20″
1908	Pittsburgh, Pa.	Filters	46.0	3′ 0″	1 : 3 : 5	13′ 2″	3′ 0″	6″	22″ x 22″	21″
1910	Pittsburgh, Pa	Filters (extension)	10.0	2′ 3″	1 : 3 : 5	13′ 2″	3′ 0″	6″	20″ diameter.	21″
	Philadelphia, Pa									
1904	Belmont	Filters	13.23	2′ 0″	1 : 3 : 5	13′ 5″	3′ 0″	6″	22″ x 22″	21″
1913*	Baltimore, Md.	Filtered water reservoir	2.78	1′ 9″ to 2′ 3″	1 : 2½ : 5	13′ 6″	3′ 0″	6″	18″ x 18″	21″
	Philadelphia, Pa.									
1912	Queen Lane	Filtered water reservoir under final filters	17.2	None.	1 : 2½ : 5	13′ 6″	3′ 9″	10″	30″ x 30″	None.
1902	Natick, Mass.	Reservoir	1.02	2′ 0″	1 : 2½ : 4½	13′ 6″	2′ 9″	6″	20″ x 20″	None.
1912	Grand Rapids, Mich.	Filtered water reservoir	0.57	1′ 6″	1 : 2 : 4	13′ 10″	3′ 0″	6″	14″ x 14″	22″
	Philadelphia, Pa.									
1902	Lower Roxborough.	Filters	2.69	2′ 0″	1 : 3 : 5	14′ 0″	3′ 0″	6″	22″ x 22″	21″
1902	Lower Roxborough.	Filtered water reservoir	0.70	2′ 0″	1 : 3 : 5	14′ 0″	3′ 0″	6″	22″ x 22″	21″
1903	Upper Roxborough.	Filters	5.58	2′ 0″	1 : 3 : 5	14′ 0″	3′ 0″	6″	22″ x 22″	21″
1903	Upper Roxborough.	Filtered water reservoir	1.74	2′ 0″	1 : 3 : 5	14′ 0″	3′ 0″	6″	22″ x 22″	21″
1904	Belmont	Filtered water reservoir	3.48	2′ 0″	1 : 3 : 5	14′ 0″	3′ 0″	6″	22″ x 22″	21″
1907	Torresdale	Filters	24.75	2′ 0″	1 : 3 : 5	14′ 0″	3′ 0″	6″	22″ x 22″	21″
1907	Torresdale	Filters (extension)	7.50	2′ 0″	1 : 3 : 5	14′ 0″	3′ 0″	6″	22″ x 22″	21″
1907	Torresdale	Filtered water reservoir	10.53	2′ 0″ to 2′ 7″	1 : 3 : 5	14′ 0″	3′ 0″	6″	22″ x 22″	21″
1902	Milford, Mass	Filters	0.25	1′ 6″	1 : 3 : 5 1 : 2½ : 5	14′ 0″	3′ 0″	6″	24″ x 24″	18″
1909	Springfield, Mass.	Filtered water reservoir	2.12	2′ 0″	1 : 3.1 : 5.3	14′ 0″	2′ 9″	6″	24″ x 24″	18″
1908	Columbus, Ohio	Filtered water reservoir (part of)	1.63	2′ 4″	1 : 2½ : 5½	15′ 2″	3′ 2″	6″	20″ x 20″	23″
1905	Washington, D. C.	Filtered water reservoir	2.28	2′ 0″	1 : 3.1 : 5.3	15′ 6″	3′ 6″	6″	30″ x 30″	24¾″
1905	Ashland, Wis.	Filters	0.50	2′ 0″	1 : 2½ : 5	15′ 9″	3′ 6″	6″	28″ x 23″	None.
1908	Pittsburgh, Pa	Filtered water reservoir	6.36	3′ 0″	1 : 3 : 5	15′ 9″	4′ 0″	6″	27″ diameter.	26″
1896	Somersworth, N. H.	Filters	0.50	2′ 6″	1 : 2½ : 5	16′ 0″	4′ 0″	6″	34½″ x 34″	None.
1913	Minneapolis, Minn	Filtered water reservoir	7.65	2′ 0″	1 : 2 : 4	16′ 4″	3′ 6″	6″	20″ x 20″	24″
1913*	Montreal, P. Q.	Final filters	6.9	3′ 0″	1 : 2½ : 5	17′ 0″	4′ 3″	6″	24″ x 24″	24″

*Under construction.

Considering, then, not only the studies which have been made but also the large amount of similar work actually constructed and in service elsewhere, it is my opinion that the Baltimore groined arches, if built of the materials and in accordance with the requirements specified, are safe and suitable for the purpose for which they were designed. I see no reason for making any changes in the design of the groined arches and I recommend that the work be constructed in accordance with the present design.

Construction.

The concrete used in the groined arches was mixed in the proportion of 1 volume of Portland cement, 2½ volumes of sand and 5 volumes of gravel. In the other parts of the work the concrete was mixed in the proportions of 1 volume of Portland cement, 2 volumes of sand and 4 volumes of gravel.

All of the cement used in the work was tested at the Municipal Laboratory. The records show that of a total of 55 cars tested all except one car passed both the 7-day and 28-day tests specified. The one car referred to was held on the results of the 7-day tests, but passed on the results of the 28-day tests. The cement is stored in a dry warehouse, where it is well protected from the weather.

The sand and gravel used in the concrete is dredged from the bottom of Baltimore harbor, is transported in cars over the street railway system and is dumped into storage bins at night. The sand and gravel is the same material as that used very extensively throughout the city of Baltimore for concrete construction; in fact, it is said that it is used almost exclusively. The gravel is graded in size from a minimum of ¼ inch to a maximum of 2 inches in diameter. Until recently, the sand and gravel as delivered is said generally to have been clean, but in one or two of the deliveries recently made the materials were dirty and were condemned as unsatisfactory for use. At times small lumps of clay have been observed in the sand.

The concrete was mixed by machinery in a batch mixer and in general has been mixed very wet. For portions of the work the concrete has been transported in concrete buggies and for other portions of the work has been elevated and then transported through a long chute.

In placing the concrete in the groined arches forms in the shape of inverted pyramids were used to form the lower parts of the depressions over the piers. While these forms served to hold the concrete below them in place they did not always serve to hold the concrete in place immediately adjacent to them, especially when the concrete was very wet. As a result, when the concrete settled down, the upper portion of the concrete was worked back into place and this process was repeated, if necessary, until the concrete was sufficiently stiff to hold its position.

In a few places the groined arches are not quite of the full thickness called for. This is noticeable mainly at the haunch of the arch. The trouble is local, however, and was caused by the use of very wet concrete which settled down slightly in places after it had been put in to the proper thickness and before initial set took place. Similar conditions have been observed in other works which have been constructed. As the area over which the arch is less than the thickness called for is small and as there is a surplus of material in the section close by, the strength of the groin as a whole should not be materially affected.

The dates on which the piers, groined arches and barrel arches were built are given in Tables 2, 3 and 4.

TABLE 2—DATES ON WHICH PIERS WERE BUILT.

No.	Date.	No.	Date.
1	Aug. 7, 1913	70	Sept. 6, 1913
2	Aug. 7, 1913	71	Sept. 6, 1913
3	Aug. 5, 1913	72	Sept. 11, 1913
4	Aug. 5, 1913	73	Sept. 11, 1913
5	Aug. 5, 1913	74	Sept. 15, 1913
6	Aug. 4, 1913	75	Sept. 11, 1913
7	July 29, 1913	76	Sept. 11, 1913
8	July 29, 1913	77	Sept. 11, 1913
9	July 29, 1913	78	Sept. 11, 1913
10	July 28, 1913	79	Sept. 11, 1913
11	July 28, 1913	80	Sept. 11, 1913
12	July 28, 1913	81	Sept. 3, 1913
13	July 28, 1913	82	Sept. 3, 1913
14	July 28, 1913	83	Sept. 3, 1913
15	July 28, 1913	84	Sept. 6, 1913
16	July 28, 1913	85	Sept. 6, 1913
17	Aug. 7, 1913	86	Sept. 6, 1913
18	Aug. 7, 1913	87	Sept. 6, 1913
19	Aug. 5, 1913	88	Sept. 11, 1913
20	Aug. 4, 1913	89	Sept. 11, 1913
21	Aug. 4, 1913	90	Sept. 11, 1913
22	Aug. 4, 1913	91	Sept. 11, 1913
23	July 29, 1913	92	Sept. 11, 1913
24	July 29, 1913	93	Sept. 11, 1913
25	July 29, 1913	94	Sept. 11, 1913
26	July 29, 1913	95	Sept. 11, 1913
27	July 28, 1913	96	Sept. 11, 1913
28	July 28, 1913	97	Sept. 22, 1913
29	July 28, 1913	98	Sept. 22, 1913
30	July 28, 1913	99	Sept. 23, 1913
31	July 28, 1913	100	Sept. 20, 1913
32	July 28, 1913	101	Sept. 19, 1913
33	Aug. 14, 1913	102	Sept. 19, 1913
34	Aug. 12, 1913	103	Sept. 19, 1913
35	Aug. 12, 1913	104	Sept. 15, 1913
36	Aug. 12, 1913	105	Sept. 15, 1913
37	Aug. 14, 1913	106	Sept. 15, 1913
38	Aug. 14, 1913	107	Sept. 18, 1913
39	Aug. 14, 1913	108	Sept. 18, 1913
40	Aug. 19, 1913	109	Sept. 18, 1913
41	Aug. 19, 1913	110	Sept. 18, 1913
42	Aug. 23, 1913	111	Sept. 18, 1913
43	Aug. 23, 1913	112	Sept. 18, 1913
44	Aug. 23, 1913	113	Sept. 22, 1913
45	Aug. 23, 1913	114	Sept. 22, 1913
46	Aug. 27, 1913	115	Sept. 22, 1913
47	Aug. 27, 1913	116	Sept. 20, 1913
48	Aug. 27, 1913	117	Sept. 19, 1913
49	Aug. 12, 1913	118	Sept. 19, 1913
50	Aug. 12, 1913	119	Sept. 19, 1913
51	Aug. 12, 1913	120	Sept. 15, 1913
52	Aug. 14, 1913	121	Sept. 15, 1913
53	Aug. 14, 1913	122	Sept. 18, 1913
54	Aug. 14, 1913	123	Sept. 15, 1913
55	Aug. 14, 1913	124	Sept. 19, 1913
56	Aug. 19, 1913	125	Sept. 19, 1913
57	Aug. 19, 1913	126	Sept. 18, 1913
58	Aug. 23, 1913	127	Sept. 18, 1913
59	Aug. 23, 1913	128	Sept. 18, 1913
60	Aug. 23, 1913	129	Sept. 24, 1913
61	Aug. 23, 1913	130	Sept. 24, 1913
62	Aug. 27, 1913	131	Sept. 24, 1913
63	Aug. 27, 1913	132	Sept. 24, 1913
64	Aug. 27, 1913	133	Sept. 25, 1913
65	Sept. 3, 1913	134	Sept. 25, 1913
66	Sept. 3, 1913	135	Sept. 26, 1913
67	Sept. 3, 1913	136	Sept. 26, 1913
68	Sept. 6, 1913	137	Sept. 26, 1913
69	Sept. 6, 1913	138	Oct. 9, 1913

TABLE 2 (Continued)—DATES ON WHICH PIERS WERE BUILT.

No.	Date.	No.	Date.
139	Oct. 9, 1913	160	Oct. 14, 1913
140	Oct. 9, 1913	161	Sept. 27, 1913
141	Oct. 14, 1913	162	Sept. 27, 1913
142	Oct. 14, 1913	163	Oct. 4, 1913
143	Sept. 24, 1913	164	Oct. 4, 1913
144	Sept. 24, 1913	165	Oct. 4, 1913
145	Sept. 24, 1913	166	Oct. 4, 1913
146	Sept. 24, 1913	167	Oct. 7, 1913
147	Sept. 24, 1913	168	Oct. 7, 1913
148	Sept. 25, 1913	169	Oct. 7, 1913
149	Sept. 25, 1913	170	Oct. 9, 1913
150	Sept. 25, 1913	177	Sept. 27, 1913
151	Sept. 27, 1913	178	Sept. 27, 1913
152	Sept. 27, 1913	179	Oct. 4, 1913
153	Sept. 27, 1913	180	Oct. 4, 1913
154	Oct. 9, 1913	181	Oct. 4, 1913
155	Oct. 9, 1913	182	Oct. 4, 1913
156	Oct. 9, 1913	183	Oct. 7, 1913
157	Oct. 14, 1913	184	Oct. 7, 1913
158	Oct. 14, 1913	185	Oct. 7, 1913
159	Oct. 14, 1913	186	Oct. 9, 1913

TABLE 3—DATES ON WHICH GROINED ARCHES WERE BUILT.

No.	Date.	No.	Date.
1	Oct. 4, 1913	30	Sept. 20, 1913
2	Sept. 10, 1913	31	Sept. 19, 1913
3	Sept. 12, 1913	32	Sept. 25, 1913
4	Sept. 3, 1913	33	Oct. 4, 1913
5	Sept. 3, 1913	34	Sept. 6, 1913
6	Sept. 3, 1913	35	Sept. 12, 1913
7	Sept. 2, 1913	36	Sept. 10, 1913
8	Sept. 2, 1913	37	Sept. 13, 1913
9	Sept. 2, 1913	38	Sept. 13, 1913
10	Aug. 30, 1913	39	Sept. 13, 1913
11	Aug. 30, 1913	40	Sept. 16, 1913
12	Aug. 29, 1913	41	Sept. 16, 1913
13	Aug. 29, 1913	42	Sept. 16, 1913
14	Aug. 27, 1913	43	Sept. 18, 1913
15	Aug. 26, 1913	44	Sept. 17, 1913
16	Aug. 26, 1913	45	Sept. 18, 1913
17	Oct. 4, 1913	46	Sept. 19, 1913
18	Sept. 6, 1913	47	Sept. 20, 1913
19	Sept. 10, 1913	48	Sept. 25, 1913
20	Sept. 12, 1913	52	Oct. 8, 1913
21	Sept. 12, 1913	53	Oct. 10, 1913
22	Sept. 12, 1913	54	Oct. 9, 1913
23	Sept. 12, 1913	68	Oct. 8, 1913
24	Sept. 13, 1913	69	Oct. 10, 1913
25	Sept. 15, 1913	70	Oct. 9, 1913
26	Sept. 18, 1913	84	Oct. 8, 1913
27	Sept. 16, 1913	85	Oct. 10, 1913
28	Sept. 19, 1913	86	Oct. 9, 1913
29	Sept. 17, 1913		

TABLE 4—DATES ON WHICH BARREL ARCHES WERE BUILT.

No.	Date.	No.	Date.
1-E	Oct. 9, 1913	5	Sept. 5, 1913
1-N	Oct. 6, 1913	6	Sept. 4 1913
2	Sept. 10, 1913	7	Sept. 3, 1913
3	Sept. 8, 1913	8-N. & W	Sept. 2, 1913
3	Sept. 6, 1913	8-W	Sept. 26, 1913

Failure of the Groined Arches.

The failure of the arches occurred on Monday, October 20, 1913. at 7.30 A. M. Eye witnesses, one of whom was below and the other on the roof, agree in their description of the failure that the first break occurred near the crown of the arch between Piers 10 and 26. At this point the groined arches fell in, being followed almost immediately by the falling in of the other groined arches and the barrel arches. It has been impossible to secure from either of these two eye witnesses any detailed information as to the sequence of events after the first arch fell, as each of them was using every effort to reach a point of safety as rapidly as possible. A plan and section of the filtered water reservoir showing the failure is given on Plate 1.

An examination of the work shows that the concrete is of good quality and that the voids have been well filled. In many instances the gravel stones have been fractured where the concrete was broken at the time of the failure. In one or two places where the roof fell the concrete does not appear to be of as great strength as elsewhere, although it seems to have plenty of strength to withstand the compressive stresses to which it was or would have been subjected. It is impossible to determine now why this concrete is not of as good quality as the rest, but it may be due to overworking the concrete in keeping it in position on the centers adjacent to the form over the pier, to using a batch of concrete which had been held too long after mixing began before being placed, or possibly to the use of dirty material. In should be stated here, however, that the groined arches did not fail first at the point where this concrete was found. To determine whether the dirt which has occasionally been found in the sand or gravel is of such a nature as to appreciably decrease the strength of the concrete, if at all, I would recommend that a series of comparative tests of mortar briquettes and concrete cubes be made, using dirty material and the same material washed.

The concrete in that portion of the roof which fell, as well as in that portion of the roof still standing, but which has been damaged to a greater or less degree and from which the centers had been removed, was all placed between August 26 and September 25. During this period the records of the United States Weather Bureau show that there was no freezing weather and hence the concrete could not have been affected by the action of frost.

From my examination of the concrete not only in that portion of the roof which fell, but in that portion still standing, and also from investigation of the conditions under which the work was built, I am of the opinion that the failure was not due to poor concrete.

The centers used for the construction of the groined arches which had been completed up to the time of the failure are made of steel and are similar in form to the wooden centers used in some of the earlier groined arches which have been built in other cities, but differ from those which have been used most extensively. As set up, the main centers run north and south between the piers and are of such a form as would permit of the construction of a full barrel arch. These centers in turn support other centers running in an east and west direction and are cut to such a form as to rest on the first-mentioned centers, the two sets of centers together forming the proper mould for the construction of the groined arches.

The first centers were struck on September 16 under the barrel arch in the northwest corner of the reservoir, or 14 days after the placing of the concrete in the arch. The striking of the centers under the groined arches began on September 25 with the removal of the main centers between Piers 3 and 4, Piers 19 and 20 and Piers 35 and 36. The striking of the centers was then continued, working toward the west. It has not been possible to ascertain the exact date on which each center was struck, but notes which had been taken in the field give the total number of centers which had been removed up to certain given dates. In order to ascertain approximately the dates on which the several centers were struck I have assumed that the rate of progress of striking the centers during each period was uniform, taking into account the days on which centers were struck.

With this assumption, and it seems as reasonable a one as can be made under the circumstances, it appears that, in the area west of Groins 3, 19 and 35 and east of that portion of the roof which fell, the concrete in the several groins had been placed from 13 to about 30 days prior to the striking of the centers below.

The word "groin" is here used to define the monolithic block over the pier and bounded by the joints passing through the crowns of the barrel arches on the four sides of the pier. In Groins 3, 20 and 35 the concrete was placed 13 days, in Groins 37 and 38 it was placed 14 days and in Groins 19, 21 and 36 it was placed 15 days before the centers were struck. None of these groins fell, although cracks can be seen in all of them except Groin 3.

In that portion of the roof in which the full groins fell, and including also those groins still standing but of which a portion fell, it appears that the concrete had been placed in the groins from about 19 to 46 days prior to the striking of the centers below. In Groin 26 it appears that the concrete had been placed about 20 days and in

Groin 10 about 40 days prior to the striking of the centers. It was between Piers 10 and 26 that the first break occurred.

In Barrel Arches 3 and 4 it appears that the concrete had been placed about 18 and 26 days, and in Barrel Arches 5, 6, 7 and 8-N. & W. from about 32 to 41 days before the centers were struck, except in the northwest corner of Barrel Arch 8-N. & W., where the centers were struck 14 days after the concrete was placed. This portion of Barrel Arch 8-N. & W., however, does not appear to have been damaged.

In view of the fact that the centers under that portion of the roof which fell were not struck until at least 18 days after the concrete was placed, and many of them had been up much longer, the failure cannot be ascribed to the striking of the centers at too early a date.

On or about Tuesday, October 14, the embankment along the north wall of the reservoir was being made, the material being moved by drag scrapers; and on Thursday, October 16, the embankment was nearly up to the top of the barrel arch, sufficiently so that a wagon could be driven from the fill onto the groined arches, and a small covering had been made near the northwest corner of the reservoir. On Friday, October 17, filling in over the groined arches was continued and also for a period of about three hours on the morning of Saturday, October 18. No more filling was put on the arches after about 10 A. M. Saturday morning. The failure took place on Monday, October 20, at 7.30 A. M. Views of the failure are shown in Plates 9 to 20, inclusive.

The aproximate limit of the earth filling on that portion of the roof which fell is shown on Plate 1 and was determined from the outline of the earth lying on the floor, it having been assumed that the earth fell vertically. This, of course, is not strictly correct, as some of the earth was thrown sidewise when the arches tipped over. The limit of the earth filling on that portion of the roof which did not fall is also shown on Plate 1, it having been located soon after the failure.

By reference to Plate 1 it will be seen that the centers had all been removed under that portion of the roof which fell, with the exception of the westerly side of Groins 32 and 48. The elevations of the top of the earth fill along and adjacent to the north wall of the reservoir, taken shortly after the failure, are shown on Plate 2.

The exact depth of the fill on top of the arches cannot be determined, but it seems to be the concensus of opinion that the filling was carried out over the arches fairly level with the fill along the north wall, although it may have sloped off slightly towards the south. Examination of the earth filling still remaining on the arches on October 29, at the time of my first examination, seems to indicate that the fill did slope off somewhat toward the south.

The maximum depth of fill along the north wall was opposite Groins 10 and 11. The transverse section on Plate 1, through Barrel Arch 5 and Groins 10, 26 and 42, showing the depth of earth filling on the groined arches, as near as I have been able to ascertain, it was constructed by taking from Plate 2 the elevation of the fill at the north wall opposite Groin 10 and then assuming that the fill sloped off slightly to the south.

The effect of the earth filling on the roof was to produce a thrust not only in the barrel arch of the north wall, but also in the groined arches. No provision was made for taking up the thrust at the southerly end of the groined arches. The effect of the unbalanced thrust was, therefore, to tend to overturn the groins and piers in a southerly direction. The three piers with the groins and earth fill above have some stability, but their moments of stability against overturning are not sufficient to balance the overturning moment of the thrust applied at the crown of the arches.

While the groined arches will safely carry the earth fill if proper provision is made for taking up the thrust, they are not safe when loaded unless provision is made for taking up the thrust, for the reason that the unbalanced thrust allows the groins to act as cantilever beams supported at the center, thereby producing tension in the concrete on the upper side of the groin.

For example, consider Groin 10. If the thrust at E is unbalanced the section of the groins between E and C acts as a cantilever beam supporting not only the weight of the concrete itself, but also the weight of the earth filling above. Computations which have been made show that under such conditions the tension in the concrete on the upper side of the groin at the section C-D due to the weight of the concrete alone would amount to about 60 pounds per square inch and that the tension due to the weight of the concrete plus that of the earth fill would amount to about 210 pounds per square inch. It is evident, therefore, that the groins acting as cantilevers alone cannot be relied on to carry the weight of the earth fill.

From examination of the structure and from studies subsequently made it is my opinion that the failure was due to the premature loading of the barrel arches and groined arches with earth before provision had been made for taking up the thrust at the southern end of the groined arches, the effect of which was to cause some of the groins to fail which acting as cantilever beams and others to be overturned. When the groined arches next to the barrel arches failed the barrel arches failed also, as there was nothing to support them.

That a thrust, as well as a cantilever action, played an important part in the failure is borne out by a detailed examination of both the fallen and standing parts of the structure. Groins 6, 7 and 8, although still standing, are cracked in an east and west direction a short distance north of the piers at a point where the groins would be expected to fail if called upon to act as cantilever beams. The crack can be seen on Plate 15. Groins 44, 45, 46 and 47 all fell to the south, the centers standing just south of these groins not having served to prevent the groins from overturning. Piers 39, 40, 41, 42 and 43 all leaned to the south, although one or two of them have since been straightened up. Numerous other examples could be cited to show the effect of the thrust.

Groins 39 40, 41, 42 and 43 were prevented from overturning to the south by the steel centers which had been erected immediately adjoining them. Groin 43, shown on Plate 10, was taken down after the failure. Groins 52, 53, 54, 68, 69, 70, 84, 85 and 86, under which the steel centers are still standing, very materially served to stiffen that portion of the structure immediately to the north. In the northeast corner of the reservoir the centers are still standing and this part of the structure apparently felt the effect of the thrust the least. Taking the structure as a whole, including many of the piers to the south, it shows the effect of a thrust. A rather surprising fact is that the structure did not fail until almost two days after the earth fill had been placed.

Replacement and Repairs.

A careful examination of that part of the structure still standing was made to determine what portions of the structure were so badly damaged that they would have to be taken down and what portions could be repaired and strengthened. As the centers are still standing under certain portions of the work it was impossible to inspect the underside of the groins above and hence it is impossible at this time to determine definitely just what should be done to these groins.

Many of the piers are intact, except that there is a slight opening of the joint at the base. If the joint is not completely closed when the pier is straightened then the joint should be grouted. In order to grout the joints it may be necessary to block or wedge up the piers. Whether the result will be perfectly satisfactory will depend on how carefully the work is done. Great care must be exercised in doing this work and if there is any doubt whatsoever as to the strength of any pier, then, in my judgment, the pier should come down rather than take any chances.

Some of the groins still standing are so badly damaged and cracked that they must be taken down and rebuilt. Others are only slightly cracked, but may have to be taken down when groins immediately adjacent are taken down.

The remaining groins can, in my opinion, be sufficiently strengthened and reinforced. For this purpose, I would recommend that the depressions in the groins be filled with concrete and that at the same time a layer of concrete, having its upper surface level, be placed over all such groins—the concrete to have a thickness of not less than 4 inches and to be reinforced with steel rods running both north and south and east and wast. As with the piers, if there is a question as to the strengthening of any groin, the groins should be taken down rather than to take chances. Where a groin is to be taken down it will probably be found necessary to take down the pier also.

Subject to revision as the work proceeds, the repairs and replacements required are indicated in Table 5.

TABLE 5.—REPLACEMENTS AND REPAIRS OF PIERS AND GROINS.

No.	Pier.	Groin.
1	O. K.	Reinforce.
2	O. K.	Reinforce.
3	Grout	Reinforce.
4	Grout	*Reinforce.
5	Grout	*Reinforce.
6	Grout	Take down.
7	Grout	Take down.
8	Grout	Take down.
15	Take down	Take down.
16	Take down	Take down.
17	Grout	Reinforce.
18	Grout	Reinforce.
19	Grout	Reinforce.
20	Grout	Reinforce.
21	Grout	Reinforce.
22	Grout	Take down.
23	Grout	Take down.
31	Take down	Take down.
32	Grout	Take down.
33	Grout	Reinforce.
34	Grout	Reinforce.
35	Grout	Reinforce.
36	Grout	Reinforce.
37	Grout	Reinforce.
38	Grout	*Reinforce.
39	Grout	Take down.
40	Grout	Take down.
41	Take down	Take down.
42	Take down	Take down.
43	Take down	Take down.
48	Take down	Take down.
52	Grout	Reinforce.
53	Grout	Reinforce.
54	Grout	Reinforce.
55	Grout	
56	Grout	
57	Grout	
58	Grout	
59	Grout	
60	Grout	
61	Grout	
62	Grout	
63	Grout	
64	Grout	
67	Grout	
68	Grout	Reinforce.
69	Grout	Reinforce.
70	Grout	Reinforce.
71	Grout	
72	Grout	
73	Grout	
74	Grout	
75	Grout	
76	Grout	
77	Grout	
78	Grout	
79	Grout	
80	Grout	
83	Grout	
84	Grout	Reinforce.
85	Grout	Reinforce.
86	Grout	Reinforce.
87	Grout	
88	Grout	
89	Grout	
90	Grout	
91	Grout	
93	Grout	
94	Grout	
95	Grout	
96	Grout	
100	Grout	
101	Grout	
102	Grout	
117	Grout	
118	Grout	

*Or take down.

The barrel arches of the north wall, east of that portion of the roof which fell, are probably all cracked longitudinally at or near the springing line, judging by the crack which was found in Barrel Arch 2 when a portion of the earth covering above the arch was removed. Otherwise the arches seem to be in good condition. The crack should be grouted. Those portions of Barrel Arches 5 and 7 still standing should be taken down. The easterly end of Barrel Arch 8-N. & W. should be taken down, but the westerly end can probably be saved. Whether this arch is cracked or not cannot be determined until the earth covering is removed. All barrel arches and groins must be supported while repairs and replacements are being made.

Acknowledgment.

In conclusion I wish to express my appreciation of the hearty co-operation which I have received at all times from the several city officials with whom I have come in contact and especially from yourself and Messrs. Armstrong, Purcell, Reeder and Horn. Every facility has been placed at my disposal to get at the facts as nearly as possible and all the records of the work have been open to my inspection.

Respectfully presented,

JOHN H. GREGORY,
Consulting Engineer.

APPENDIX No. 5

Baltimore City Water Department—Biological Laboratories.

LAKE MONTEBELLO, February 7, 1914.

MR. EZRA B. WHITMAN,
Water Engineer.

DEAR SIR—I respectfully submit herewith a report of the work done in the biological laboratories of the Water Department during the year ending December 31, 1913.

The largest portion of the work consisted of bacteriological examinations of samples of water taken daily, excepting Sundays and some holidays, from Lake Montebello influent and effluent, Lake Clifton influent and effluent, Hampden Reservoir influent and effluent, and Druid Lake effluent; daily readings of turbidity and apparent color of samples from the above places, excepting Lake Clifton influent and Hampden Reservoir influent; weekly chemical and microscopical analyses of samples from these places and from Lake Ashburton, Guilford Reservoir and High Service Reservoir; and weekly bacteriological analyses of samples from Lake Ashburton, Guilford Reservoir, High Service Reservoir, and from city taps representing the four systems of distribution.

The bacteriological examinations consisted of an enumeration of the bacteria growing at 20 degrees C. and those growing at 37 degrees C., and a systematic procedure for the differential isolation of members of the B. coli group of gas-producing organisms. The chemical analyses consisted of the usual determinations as shown in the tables of the results obtained. The microscopical examinations included determinations of the amount of microscopic organisms, or algae, and of amorphous matter, the results of both being expressed as standard units per cubic centimeter, although record of the predominating species of organisms was made.

In addition to this work, analyses were made of the hypochlorite of lime received at Lake Montebello and at Lake Roland, and of each solution, made daily or several times daily from this bleach, to govern the amount applied to the water. Numerous examinations of sand, paints and other miscellaneous materials were also made, and several studies, not of a routine nature, were conducted. Weekly bacteriological and chemical analyses were made on samples of water from Herring Run.

Twenty-eight thousand tubes of culture media, consisting of fifteen different kinds, five of which were only occasionally used, were required for the bacteriological work. These media were, of course, all made in the laboratory.

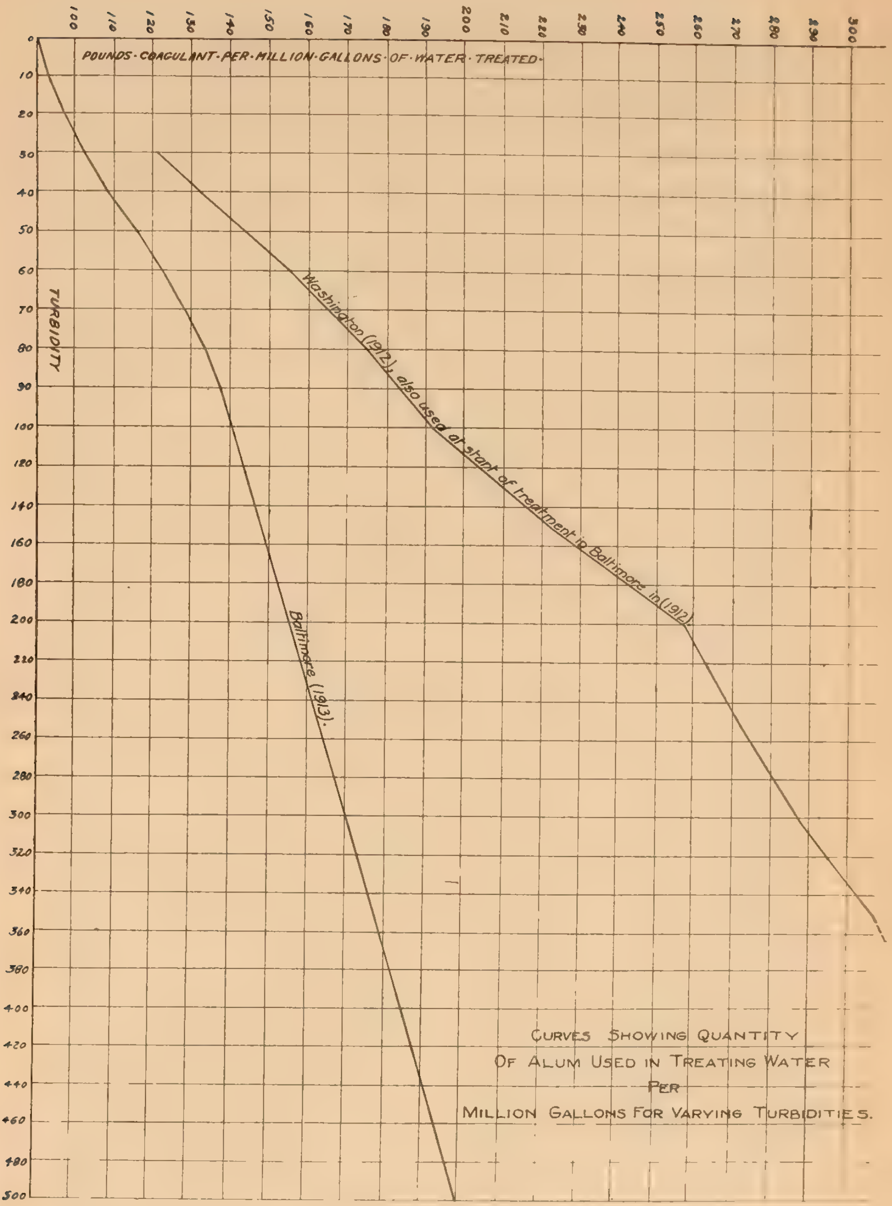
The various analyses are tabulated, in most cases, by monthly averages, as this gives more condensed tables and yet shows the varying quality of the water throughout the year. These results are shown in Tables Nos. 1 and 2. The exceptions to this procedure are with the city tap samples and the bacteriological samples from Lake Ashburton, Guilford Reservoir and High Service Reservoir. These samples were taken only four or five times a month, and it was necessary to average the fifty-two weekly samples to secure a trustworthy estimation of the B. coli group organisms. These results are given in Table No. 6. Tables Nos. 3, 4 and 5 show the averages of weekly analyses for the chemical and microscopical content.

In accordance with your suggestion, the daily analytical results have been tabulated in a manner provided by the recently proposed method whereby the variation in the quality of the water is very clearly shown in greater detail. These tables are Nos. 7 to 10, inclusive.

It must be borne in mind, if we should make a sum of the various B. coli group organisms in a particular reservoir, that this sum will be higher than would have been obtained by calling all such organisms B. coli communis or B. coli communior; because, many times, two or three different types of organisms were isolated from the same dilution of a sample, and without the special differentation which was made, these several types would have been considered the same organism and taken into account but once in forming the average.

During the year aluminum sulfate was used almost continuously in both supplies.

The amount of this coagulant applied depended upon the condition of the water as shown by the daily turbidity readings and bacteriological examinations. At first, tables prepared from those used in Washington were followed, but later the amounts were varied to better suit the local conditions. Graphs or curves were then plotted, and from them formulæ, to show the amount of alum to be applied for any turbidity were derived. This has effected a considerable saving in the amount of aluminum sulfate used. A copy of two of these curves is submitted with this report. They show the two amounts of aluminum sulfate in pounds per million gallons of water treated for varying turbidities. The upper curve represents the



Curves Showing Quantity
Of Alum Used in Treating Water
Per
Million Gallons for Varying Turbidities.

amounts used for the varying turbidities when the treatment was instituted and the lower curve indicating the amounts used at the present time.

The use of calcium hypochlorite was, of course, continued without interruption. The amount applied was varied several times during the year. In the Gunpowder River supply, 0.5 part of available chlorin per million parts of water was applied from January 1 to January 15 at Lake Montebello effluent, the water already in the lake having been previously treated at Loch Raven before the hypochlorite plant was moved to Montebello. From January 15 to June 22, 0.8 part per million was used; from this latter date until August 9, 1.0 part per million was used, when the amount was further increased to 1.5 parts, and this amount was continued until September 18, when the use of 2.0 parts per million was advised. As the amount of hypochlorite was increased from time to time, many complaints of the taste of the treated water were received, and a considerable amount of residual chlorin was found upon analysis of samples from various parts of the city. It was, therefore, decided to decrease the amount of chlorin applied, and from October 30 to November 30, 1.75 parts were used, while from November 30 to December 31, the amount was 1.5 parts per million.

In the Jones Falls supply the amounts of available chlorin applied were as follows: January 1 to May 24, 1.5 parts per million; May 25 to June 21, 1.25 parts per million; June 22 to August 8, 1.5 parts; August 9 to November 6, 2.0 parts; November 7 to November 29, 1.75 parts, and from November 30 to December 31, 2.0 parts per million. In consideration of the difficulty with which this supply is effectively treated, it was thought advisable to continue with the use of 2.0 parts per million of available chlorin.

The results of the routine work of the laboratory have furnished material for several interesting studies. One of these is a comparison of the relative numbers of certain types of gas-producing oragnisms isolated from the two sources of supply. There are nearly five times as many B. acidi lactici in the Gunpowder River as in Jones Falls, while there are but one and one-half times as many true B. coli communis and communior, and only one and one-fifth times as many B. (lactis) ærogenes. B. acidi lactici is an organism that is found in large numbers in sour milk and dairy waste, and in the Gunpowder River it is probably derived from the many dairy farms located on the water-shed. B. (lactis) ærogenes is usually present in sewage, and the B. coli organisms are seldom derived from any other source. It will be seen, therefore, that without this differential isolation of the members of the B. coli group, the Gunpowder River water would be considered twice as much contaminated with sewage as Jones Falls; whereas, it is probably no more than one and one-third as contaminated.

A comparison of the relative numbers of bacteria growing at 20 degrees C. and 37 degrees C. show that the ratio of the former to the latter is about ten to one in the yearly average, with a lesser ratio in the warmer weather. A striking fact brought out by one method of grouping the bacterial counts and gas-producing organisms is that the bacterial count increases in geometric progression as the members of the B. coli group were isolated from 10, 1, and 0.1 c.c.

Other studies have lead to the adoption of certain methods of technic that have resulted in a most satisfactory procedure for the numerical isolation of the several types of organisms which are useful in determining the quality of the waters examined.

During the year a number of apparently different types of gas-producing organisms have been secured from the routine examinations, and whenever time has permitted, work has been done upon the complete procedure of classifying them; but this work is long and tedious, and has not yet been completed.

Analyses of the inorganic residue of the Gunpowder River water were occasionally made, and an average of ten analyses show the following results:

Alkalinity	45.7
Lime value	56.7
Silica (as SiO_2)	12.5
Iron and alumina (as $Al_2O_3+Fe_2O_3$)	2.0
Calcium (as Ca)	12.1
Magnesium (as Mg)	5.6

The results of the purification of the two sources of supply furnish the basis of an interesting speculation regarding the probable chances of contracting typhoid fever by drinking these waters. The average number of cases of typhoid fever occurring per year during the five years, from 1905 to 1909, was 1,229. If we assume that 25 per cent. of the cases (a ratio sufficient to satisfy the severest critic) were caused by the water supply, the chances of having contracted the disease by this means were 51 in 100,000. Although the amount of water from the Jones Falls supply constituted only about one-fourth of the total consumption, the quality of the water is about the same as that of the Gunpowder River, and it may be assumed to have had its pro ratio share in the causation of typhoid fever. The average reduction in the members of the B. coli group, effected by the use of aluminum sulfate and calcium hypochlorite was 97.8 per cent. As the bacillus typhosis is more vulnerable to the treatment than the members of the B. coli group, it is reasonable to suppose that the organisms causing typhoid fever suffered a corresponding reduction. The logical sequence, therefore, is that for every hundred chances of contracting typhoid fever by drinking the untreated water, there are but 2.2 chances of contracting this disease by drinking the water after it has been treated; or, in other words, that the above mentioned chances of 51 in 100,000 being reduced by 97.8 per cent., the present chances of contracting typhoid fever by drinking the water as distributed to the city are 12 in one million. This, of course, is with the assumption that the water has not become very materially worse within the last five or six years; and any slight increase in pollution will have been more than compensated by attributing as many as 25 per cent. of the cases, prior to the installation of treatment, to the water supply.

In conclusion, I desire to commend the assistant bacteriologist, Mr. Edgar A. Sandman, and the laboratory assistant, Mr. J. Bernard Cole, for their ability, and to express my appreciation of their interest in the work and the faithful performance of their duties.

Yours respectfully,

J. Bosley Thomas, *Bacteriologist.*

TABLE No. 10

Month.	Bacteria per c.c. Growing at 37° C.									
	Roland Effluent									
			Number of Times Between							
	Number of Test Days	Mean	10 and 20	21 and 50	51 and 100	101 and 200	201 and 500	501 and 1,000	1,001 and 10,000	Above 10,000
January	21	90	0	5	11	2	5	1	1	0
February	21	77	0	6	15	2	1	0		
March	22	130	0	2	11	3	6	0		
April	14	150	0	0	0	2	10	1	1	0
May	21	160	0	3	8	4	5	1	0	
June	21	110	0	1	7	9	4	0		
July	25	220	0	8	7	1	4	3	2	0
August	12	850	0	0	0	1	5	2	4	0
September	15	850	0	0	0	2	9	1	3	0
October	11	600	0	0	3	5	2	1	1	0
November	17	40	0	7	7	1	1	0	1	0
December	26	110	0	0	1	19	[illegible]	0		
Totals	236			27	73	59	5[illegible]	8	16	
Averages		190								
Per cent. Times				11	31	25	22	[illegible]	7	

Month.	Bacteria per c.c. Growing at 37° C.										
	Hampden Influent										
			Number of Times Between								
	Number of Test Days	Mean	0 and 5	6 and 10	11 and 20	21 and 50	51 and 100	101 and 200	201 and 500	501 and 1,000	Above 1,000
January	22	100	0	1	0	5	9	5	2	0	
February	21	46	0			11	4	6			
March	22	90	0	[illegible]	1	7	4	10			
April	13	340	0		1	0	0	6	[illegible]	1	0
May	21	95	0		0	6	6	8	1	0	
June	21	65	0		1	1	[illegible]	2	1	0	
July	26	110	0			16	5	[illegible]	1	2	0
August	12	80	0		[illegible]	2	3	0	1	0	
September	16	90	0	0	0	2	7	2	2	0	
October	15	55	0	1	1	2	1	2	0	0	
November	18	50	0		1	8	5	0	1	0	
December	26	35	0			17	6	0			
Totals	240			1	21	90	58	38	15	[illegible]	
Averages		85									
Per cent. Times				6	8	37	24	16	6	1	

Month.	Bacteria per c.c. Growing at 37° C.										
	Hampden Effluent										
			Number of Times Between								
	Number of Test Days	Mean	0 and 5	6 and 10	11 and 20	21 and 50	51 and 100	101 and 200	201 and 500	501 and 1,000	Above 1,000
January	22	90	0	0	0	4	11	6	1	0	
February	24	32	0	3	6	12	1	0			
March	23	45	0	0	1	8	[illegible]	9	0		
April	26	250	0	0	0	1	0	11	12	2	0
May	23	70	0	0	0	10	7	4	0		
June	22	140	0	0	0	9	6	3	[illegible]	0	
July	26	170	0	0	1	5	13	3	3	1	1
August	25	180	0	0	2	7	7	4	4	0	1
September	22	1,200	0	0	1	4	3	[illegible]	0	5	7
October	17	600	0	0	0	3	2	5	2	1	4
November	20	50	0	0	0	16	3	1	0		
December	26	43	0	0	3	18	4	2	0		
Totals	276			3	14	97	65	48	27	9	13
Averages		240									
Per cent. Times				2	5	35	23	17	8	3	[illegible]

Month.	Bacteria per c.c. Growing at 37° C.										
	Druid Effluent.										
			Number of Times Between								
	Number of Test Days	Mean	0 and 5	6 and 10	11 and 20	21 and 50	51 and 100	101 and 200	201 and 500	501 and 1,000	Above 1,000
January	21	100	0	0	2	5	5	5	4	0	
February	24	27	0	0	6	18	0				
March	25	43	0	0	2	[illegible]	[illegible]	9	0		
April	26	150	0	0	2	[illegible]	6	10	2	1	0
May	26	29	0	1	6	17	2	0			
June	20	45	0	0	[illegible]	9	3	0	1	0	
July	25	23	0	6	6	12	1	0			
August	25	28	[illegible]	1	3	[illegible]	5	0			
September	22	95	4	1	[illegible]	2	4	5	3	0	
October	16	38	1	4	3	3	4	1	0		
November	20	13	2	2	13	3	0				
December	26	13	1	9	12	4	0				
Totals	276		16	24	65	93	37	30	10	1	
Averages		40									
Per cent. Times			6	9	23	34	13	11	4		

Month.	Bacteria per c.c. Growing at 20° C.										
	Roland Effluent										
			Number of Times Between								
	Number of Test Days	Mean	10 and 20	21 and 50	51 and 100	101 and 200	201 and 500	501 and 1,000	1,001 and 10,000	10,001 and 100,000	Above 100,000
January	24	10,000	0	0	0	0	8	[illegible]	5	8	0
February	24	450	0	0	3	6	8	[illegible]	4	0	0
March	22	2,100	0	0	4	4	4	2	7	1	0
April	14	5,000	0	0	0	0	1	2	9	2	
May	21	650	0	0	0	3	10	2	6	0	
June	22	470	0	0	2	4	8	[illegible]	1	0	
July	26	970	0	0	4	6	6	2	8	0	
August	13	1,100	0	0	0	0	2	6	[illegible]	0	
September	15	4,100	0	0	1	0	6	2	4	2	0
October	14	4,200	0	[illegible]	4	0	3	2	1	1	0
November	17	1,800	0	1	0	0	[illegible]	4	9	0	
December	26	18,000	0	0	0	0	0	0	20	5	1
Totals	238			4	18	23	59	35	79	19	1
Averages		4,100									
Per cent. Times				2	7	10	25	15	33	8	

Month.	Bacteria per c.c. Growing at 20° C.												
	Hampden Influent												
			Number of Times Between										
	Number of Test Days	Mean	0 and 5	6 and 10	11 and 20	21 and 50	51 and 100	101 and 200	201 and 500	501 and 1,000	1,001 and 10,000	10,001 and 100,000	Above 100,000
January	25	2,800	1	0	0	8	3	3	1	9	0		
February	24	36	3	2	4	12	2	0	1	0			
March	22	480	[illegible]	2	0	6	[illegible]	5	3	1	1	0	
April	[illegible]	1,800	0	0	0	0	1	2	4	2			
May	[illegible]	150	0	0	0	2	5	12	2	0	4	0	
June	25	250	0	1	0	8	6	[illegible]	4	2	1		
July	26	1,300	0	[illegible]	2	4	3	2	3	3	7		
August	[illegible]	160	2	3	2	2	1	0	2	1	0		
September	16	95	0	3	3	4	2	2	1	1	0		
October	[illegible]	23	2	0	10	2	0	1	0				
November	18	450	2	1	2	8	[illegible]	0	1	0			
December	24	800	0	2	2	6	2	2	0	2	8	0	
Totals	242		11	16	24	62	33	32	22	21	21		
Averages		700											
Per cent. Times			4	7	10	26	14	13	9	9	9		

Month.	Bacteria per c.c. Growing at 20° C.												
	Hampden Effluent												
			Number of Times Between										
	Number of Test Days	Mean	0 and 5	6 and 10	11 and 20	21 and 50	51 and 100	101 and 200	201 and 500	501 and 1,000	1,001 and 10,000	10,001 and 100,000	Above 100,000
January	26	6,500	0	0	0	1	2	2	0	18	3	0	
February	24	12	3	6	11	4	0						
March	25	[illegible]	0	2	1	8	3	8	1	2	0		
April	26	750	0	0	0	0	1	8	7	4	6	0	
May	21	140	0	0	0	0	5	13	3	0			
June	21	2,000	0	0	0	0	0	2	4	4	10	1	0
July	26	1,000	0	0	0	0	1	4	6	4	11	0	
August	26	450	0	1	0	1	2	8	6	5	[illegible]	0	
September	22	7,000	1	0	0	2	1	2	4	1	5	4	2
October	16	2,500	0	0	3	1	3	2	2	0	4	1	0
November	19	17,000	0	0	0	1	0	4	1	1	2	9	0
December	26	45,000	0	0	0	0	0	0	0	0	0	9	17
Totals	278		4	9	15	18	18	51	34	39	44	24	19
Averages		40,000											
Per cent. Times			1	3	5	6	6	20	12	14	16	9	7

Month.	Bacteria per c.c. Growing at 20° C.												
	Druid Effluent												
			Number of Times Between										
	Number of Test Days	Mean	0 and 5	6 and 10	11 and 20	21 and 50	51 and 100	101 and 200	201 and 500	501 and 1,000	1,001 and 10,000	10,001 and 100,000	Above 100,000
January	21	3,800	0	0	1	0	2	2	1	16	1	0	
February	24	15	4	7	9	3	1	0					
March	25	190	0	2	1	9	1	7		1	1		
April	22	[illegible]	0	0	[illegible]	0	7	4	8	[illegible]	0		
May	25	55	0	0	2	8	15	0					
June	20	500	0	0	1	2	2	5	7	1		0	
July	25	370	0	0	1	1	6	4	12		1		
August	26	450	7	4	1	2	0	6	[illegible]	1	0		
September	21	220	5	0	0	[illegible]	2	2	7		0		
October	16	100	0	0	3	[illegible]	3	4		0			
November	20	400	1	0	1	1		1	2	6	5	0	
December	25	20,000	0	0	0	0	0	0	1	0	8	16	0
Totals	272		17	13	20	31	42	35	49	[illegible]	18	16	
Averages		2,200											
Per cent. Times			6	5	7	11	15	13	18	11	7	6	

Month.	B. Coli communis, B. Coli Communior, B. Lactis Aerogenes, B. Acidi Lactici														
	Roland Effluent					Hampden Effluent					Druid Effluent				
		Number of Times Present*					Number of Times Present*					Number of Times Present*			
	Number of Test Days	[illegible]	[illegible]	[illegible]	[illegible]	Number of Test Days	[illegible]	[illegible]	[illegible]	[illegible]	Number of Test Days	[illegible]	[illegible]	[illegible]	[illegible]
January	[illegible]	[illegible]	9	11	21	[illegible]	0	[illegible]	0	1	[illegible]	[illegible]	0	1	[illegible]
February	24	0	0	[illegible]	1	24	0	0	0	[illegible]	24	[illegible]	[illegible]	[illegible]	[illegible]
March	[illegible]	0		10	1	22	0	1	2	2	25	0	0	2	
April	[illegible]	[illegible]	3	[illegible]	1	26	0	[illegible]	14	[illegible]		0	1	[illegible]	18
May	19	[illegible]	1	14	19	[illegible]	0	[illegible]	1	[illegible]	[illegible]	0	[illegible]	[illegible]	
June		[illegible]	[illegible]	18	24	[illegible]	1	[illegible]	1	[illegible]	[illegible]	1	[illegible]		
July	[illegible]	1	[illegible]	[illegible]	[illegible]	26	[illegible]	[illegible]	16	[illegible]	26		[illegible]	[illegible]	25
August	1	1	[illegible]	1	1	26	[illegible]	[illegible]	[illegible]	[illegible]	26	1		17	
September	16	4	[illegible]	16	16	22	1	[illegible]	[illegible]	18	22	[illegible]			[illegible]
October	14			12	[illegible]	17	1	4	11	[illegible]	17		1	[illegible]	[illegible]
November	17	0	[illegible]	[illegible]	12	20	[illegible]			1	20	[illegible]	[illegible]	[illegible]	[illegible]
December	26	0		7	15	[illegible]	0	0	[illegible]	18	[illegible]	0	0	1	[illegible]

TABLE No. 9

Bacteria per c.c. Growing at 37° C.

Montebello Influent — Montebello Effluent — Clifton Influent — Clifton Effluent

Bacteria per c.c. Growing at 20° C.

Montebello Influent — Montebello Effluent — Clifton Influent — Clifton Effluent

B. Coli Communis, B. Coli Communior, B. Lactis Aerogenes, B. Acidi Lactici

Montebello Influent — Montebello Effluent — Clifton Effluent

Number of Times Present

Month	Number of Test Days	Mean	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
January	19	570	0	[illegible]	1	[illegible]	1	0	1	1
February	21	[illegible]	0	1	13	1	1	1	0	[illegible]
March	17	[illegible]	0	[illegible]	6	[illegible]	10	[illegible]	[illegible]	[illegible]
April	10	1,100	0	0	0	1	0	[illegible]	3	2
May	7	600	0	0	0	[illegible]	1	[illegible]	0	2
June	11	[illegible]	0	0	1	[illegible]	[illegible]	2	0	[illegible]
July	11	280	0	0	2	0	5	5	2	[illegible]
August	17	170	0	0	0	1	[illegible]	8	[illegible]	[illegible]
September	21	[illegible]	0	0	1	2	6	7	1	1
October	20	[illegible]	0	0	0	0	[illegible]	7	5	5
November	21	2,000	0	0	[illegible]	0	[illegible]	11	0	[illegible]
December	21	2,000	0	0	2	6	9	2	[illegible]	0
Totals	198			10	[illegible]	[illegible]	[illegible]	18	18	19
Averages		600								
Per cent. times				[illegible]	10	[illegible]	[illegible]	21	9	9

Month.	Turbidity.																				
	Montebello Influent.									Montebello Effluent.						Clifton Effluent.					
	No. of Test Days.	Mean.	No. of Times Between—							No. of Test Days.	Mean.	No. of Times Between—				No. of Test Days.	Mean.	No. of Times Between—			
			0 and 5	6 and 10	11 and 20	21 and 50	51 and 100	101 and 200	Above 200			0 and 5	6 and 10	11 and 20	Above 20.			0 and 5.	6 and 10	11 and 20.	Above 20.
January	23	11	0	17	5	1	0	...	...	29	9	0	22	7	0	30	8	2	24	4	0
February	24	9	0	23	1	0	.	...	...	24	7	1	23	0	...	24	6	2	22	0	...
March	14	8	6	5	2	1	0	..	...	24	6	11	10	3	0	25	5	14	11	0	...
April	13	49	0	0	2	7	4	0	.	26	8	4	17	5	0	26	9	1	16	9	0
May	14	38	0	0	3	9	2	0	.	27	7	6	21	0	...	27	7	7	18	2	0
June	20	44	0	1	1	12	6	0	.	25	6	3	22	0	...	25	10	4	9	12	0
July	20	85	0	0	0	2	14	4	0	26	8	1	25	0	.	26	11	0	14	12	0
August	23	80	0	0	0	5	10	8	0	26	8	0	24	2	.	26	9	0	23	3	0
September	26	95	0	0	0	9	9	6	2	24	8	0	23	1	0	24	8	0	22	2	0
October	24	80	0	0	0	9	9	6	0	27	7	5	22	0	...	27	6	8	19	0	...
November	28	15	0	2	4	11	10	1	0	25	7	3	22	0	...	25	6	7	18	...	...
December	26	19	0	12	8	5	0	1	0	21	6	10	11	0	...	21	5	18	6	...	.
Totals	255		6	60	26	71	64	26	2	307		44	245	18	..	309	...	63	202	44	.
Averages		[illegible]				...	...	...			7			...	...	...	7	...	...	...	...
Per cent times			2	24	10	28	25	10	1			14	80	6	...	...	...	20	65	14	...

Month.	Apparent Color.																						
	Montebello Influent.									Montebello Effluent.							Clifton Effluent.						
	No. of Test Days	Mean	No. of Times Between—							No. of Test Days.	Mean	No. of Times Between—					No. of Test Days	Mean	No. of Times Between—				
			0 and 10	11 and 20.	21 and 50	51 and 100.	101 and 200	201 and 500.	Above 500.			0 and 5.	6 and 10	11 and 20	21 and 50.	Above 50.			0 and 5	6 and 10	11 and 20	21 and 50	Above 50.
January	23	29	0	8	13	2	0	..	..	29	26	0	0	11	16	2	30	21	0	0	20	10	0
February	24	21	0	12	12	0	..		.	24	17	0	2	16	6	0	26	16	0	3	19	4	0
March	14	19	0	10	4	0	..	..		24	17	0	0	20	4	0	25	16	0	2	19	4	0
April	13	80	0	0	4	4	5	0		26	13	1	3	20	2	0	26	15	0	5	17	4	0
May	13	55	0	0	6	6	1	0	..	27	11	1	10	16	0	...	27	11	0	14	12	1	0
June	20	75	0	1	4	13	2	0	..	25	11	1	11	13	0	..	25	15	0	6	16	3	0
July	20	140	0	0	0	6	13	1	0	26	12	0	4	22	0		26	17	0	0	21	5	0
August	23	130	0	0	1	7	15	0	..	26	12	0	1	22	0	..	26	14	0	1	23	2	0
September	26	160	0	0	1	11	6	8	0	24	12	0	2	22	0		24	13	0	3	21	0	..
October	24	170	0	0	0	8	8	8	0	27	10	1	14	12	0		27	10	1	13	13	0	..
November	28	75	0	1	9	13	5	0	..	25	11	0	12	13	0		25	12	0	8	17	0	.
December	26	36	0	14	9	2	0	1	0	24	9	0	19	5	0		24	8	0	21	3	0	.
Totals	254	...	...	46	63	72	55	18	.	307	.	1	81	192	28	2	311	...	1	76	201	33	...
Averages		83	...								13	.		...	.....		.	11	.	.	.	...	...
Per cent times		...	...	18	25	29	22	7		.	...	2	26	62	9	1	...	...		24	65	11	...

TABLE No. 8.

Month.	Turbidity.																							
	Roland Effluent.								Hampden Effluent.								Druid Effluent.							
	No. of Test Days.	Mean.	No. of Times Between—						No. of Test Days.	Mean.	No. of Times Between—						No. of Test Days.	Mean.	No. of Times Between—					
			0 and 5	6 and 10	11 and 20	21 and 50	51 and 100	Above 100			0 and 5	6 and 10	11 and 20	21 and 50.	51 and 100	Above 100.			0 and 5	6 and 10	11 and 20	21 and 50	51 and 100.	Above 100.
January	31	[illegible]	0	4	15	11	1	0	31	19	0	6	15	10	0		31	22	0	3	14	11	0	.
February	24	11	0	10	14	0			24	6	8	16	0		.		24	7	2	22	0			.
March	[illegible]	[illegible]	0	6	7	9	0	..	25	21	[illegible]	5	7	11	0		25	21	0	7	6	12	0	...
April	14	10	0	0	0	10	4	0	26	59	0	0	0	12	12		[illegible]	[illegible]	0	0	12	7	6	0
May	21	30	0	[illegible]	[illegible]	11	2	0	26	17	0	3	17	6	0		26	8	0	21	5	0		
June	[illegible]	13	0	10	13	[illegible]	0		[illegible]	16	0	2	21	2	0		[illegible]	7	0	25	0			
July	[illegible]	[illegible]	0	3	[illegible]	8	0	..	[illegible]	11	0	15	11	0			[illegible]	7	0	26	0			
August	13	[illegible]	0	[illegible]	[illegible]	[illegible]	1	0	[illegible]	8	0	[illegible]	1	0			[illegible]	7	0	26	0			
September	15	35	0	0	8	7	0	...	21	15	0	10	8	3	0		21	7	0	20	1	0		
October	[illegible]	[illegible]	0	3	1	6	2	0	15	20	0	10	5	0			15	6	0	15	0			
November	19	12	0	6	13	0			19	9	1	13	5	0	..		19	4	13	6	0			
December	[illegible]	15	0	11	12	3	0		26	10	0	11	14	1	0		26	6	9	17	0			
Totals	[illegible]			63	111	[illegible]	10		290		11	116	104	45	12	2	289		24	188	38	33	6	
Averages		[illegible]								18								14						
Per cent times				4	44	28	4				4	40	37	15	4	.			8	65	13	12	2	

Month.	Apparent Color.																									
	Roland Effluent.								Hampden Effluent.									Druid Effluent.								
	No. of Test Days.	Mean.	No. of Times Between—						No. of Test Days.	Mean.	No. of Times Between—							No. of Test Days.	Mean.	No. of Times Between—						
			0 and 10	11 and 20	21 and 50	51 and 100	101 and 200.	Above 200.			0 and 5	6 and 10	11 and 20	21 and 50	51 and 100	101 and 200	Above 200			0 and 5	6 and 10.	11 and 20.	21 and 50	51 and 100	101 and 200	Above 200.
January	31	50	0	0	20	9	2	0	31	16	0	0	[illegible]	18	10	1	0	31	55	0	0	2	14	11	1	0
February	24	26	0	4	20	0	....		24	15	0	4	16	4	0	....	.	24	18	0	0	17	7	0	....	
March	[illegible]	40	0	0	16	6	0	...	25	36	0	1	4	15	4	1	0	25	37	0	0	1	15	6	0	
April	14	70	0	0	8	3	3	0	26	90	0	0	0	9	8	8	1	26	55	0	0	1	13	11	1	0
May	21	39	0	3	13	5	0		26	28	0	0	9	14	3	0		26	15	0	2	22	2	0		
June	[illegible]	23	0	17	8	0	....		25	30	0	0	4	21	0			25	14	0	3	22	0			
July	26	26	0	12	13	1	0	...	26	17	0	1	19	6	0			26	11	0	8	18	0			
August	13	[illegible]	0	5	[illegible]	2	1	0	26	12	0	6	20	0				26	11	0	1	[illegible]	0			
September	15	50	0	[illegible]	8	4	1	0	21	26	0	3	9	6	3	0		21	12	0	9	11	1	0		
October	15	80	0	2	6	4	2	1	15	60	0	0	1	9	3	2	0	15	10	0	9	6	0			
November	19	21	0	10	9	0			19	14	0	[illegible]	17	0				19	8	0	18	1	0			
December	26	85	0	12	11	3	0		26	22	0	0	14	11	1	0		26	10	0	16	10	0			
Totals	251			67	137	37	9		290			17	115	113	32	12	1	290			69	136	52	31		
Averages		46								33									21							
Per cent times				27	55	15	3					6	40	40	11	3					24	47	18	11		

TABLE No. 5.

Month.	Turbidity.			Apparent Color.			Oxygen Consumed.			Nitrogen As Free Ammonia.			Nitrogen As Albuminoid Ammonia.			Nitrogen As Nitrites.			Nitrogen As Nitrates.			Microscopic Organisms (Standard Units per c. c.)			Amorphous Matter (Standard Units per c. c.)		
	Lake Ashburton	High Service Reservoir.	Guilford Reservoir	Lake Ashburton	High Service Reservoir.	Guilford Reservoir.	Lake Ashburton.	High Service Reservoir.	Guilford Reservoir	Lake Ashburton.	High Service Reservoir.	Guilford Reservoir.	Lake Ashburton.	High Service Reservoir.	Guilford Reservoir.	Lake Ashburton.	High Service Reservoir.	Guilford Reservoir.	Lake Ashburton	High Service Reservoir.	Guilford Reservoir.	Lake Ashburton.	High Service Reservoir.	Guilford Reservoir.	Lake Ashburton.	High Service Reservoir.	Guilford Reservoir.
January	4	4	4	12	12	12	1.5	2.3	2.0	.015	.041	.024	.089	.097	.069	.004	.006	.004	0.57	0.57	0.56	120	a d * 260	a * 3,300	2,500	2,600	3,800
February	7	5	4	14	13	10	2.1	1.8	1.7	.024	.040	.043	.120	.098	.087	.006	.005	.004	0.53	0.77	0.63	a 95	a 50	a 240	3,600	3,800	2,600
March	7	9	6	16	23	15	2.7	3.3	2.4	.022	.034	.013	.146	.164	.130	.006	.005	.003	0.49	0.76	0.60	b g m 75	a b m 150	c 16	3,800	5,000	2,600
April	10	10	9	14	16	15	3.2	3.1	3.2	.043	.038	.027	.381	.171	.145	.007	.004	.003	0.64	0.49	0.42	b s a 60	a b m s c a 80	c s 18	5,000	6,000	4,200
May	6	5	4	10	9	7	2.5	2.2	2.4	.045	.040	.034	.142	.143	.150	.004	.003	.003	0.47	0.45	0.40	a d 110	b m d 250	d 280	4,300	3,800	1,400
June	6	6	4	9	9	5	2.4	2.1	2.5	.048	.045	.060	.165	.146	.154	.004	.003	.004	0.20	0.19	0.22	a b 55	a b c 160	d m 120	3,400	4,600	2,700
July	5	6	5	8	9	5	2.0	1.8	1.7	.024	.017	.019	.133	.115	.103	.004	.004	.003	0.25	0.22	0.25	t 400	x 270	d b 650	2,800	2,100	2,900
August	5	5	4	8	7	6	1.6	1.4	1.9	.049	.036	.019	.139	.120	.120	.004	.003	.003	0.26	0.25	0.22	45	b d 750	b x u 2,100	1,600	1,600	2,900
September	5	4	3	7	6	5	1.8	1.9	2.0	.032	.037	.033	.081	.094	.116	.004	.002	.003	0.25	0.16	0.21	u d m 40	b d z 550	b c u 130	4,500	4,200	4,400
October	5	4	4	9	7	6	2.0	1.5	1.6	.036	.034	.035	.122	.091	.107	.003	.002	.002	0.12	0.19	0.14	v w 160	t b e w 1,400	b c t z 170	6,000	2,600	4,800
November	6	5	4	9	6	6	1.5	1.6	1.6	.036	.032	.036	.114	.087	.092	.002	.002	.002	0.12	0.21	0.16	g 120	b c 75	b g 32	5,500	3,500	3,500
December	5	4	4	9	7	5	2.1	1.5	1.8	.055	.034	.046	.115	.085	.095	.003	.003	.003	0.18	0.24	0.22	10	5	5	4,300	3,000	3,400
Average	5.8	5.6	4.6	11	10	8	2.1	2.0	2.1	.036	.037	.032	.146	.118	.114	.004	.004	.003	0.34	0.38	0.34	100	330	600	3,900	3,600	3,300

(a) Asterionella (c) Cladothrix (e) Melosira. (m) Daphnia (t) Chroococcus (v) Conochilis. (x) Botryococcus (z) Polyedrium.
(b) Synedra (d) Cœlosphærium (g) Cyclops (s) Mestigocerca (u) Vorticella. (w) Diplococcus. (y) Cœlastrium. *Treated January 15 for reduction in algae.

TABLE No. 6.

	Bacteria per c. c.		B. Coli Group.			
	Growing at 37° C.	Growing at 20° C.	B. Coli Communis	B. Coli Communior.	B. (Lactis) Aerogenes.	B. Acidi Lactici
Lake Ashburton	10	210	.043	.049	.038	.043
High Service Reservoir	18	2,900	.002	.062	.107	.022
Guilford Reservoir	200	1,000	.003	.028	.008	.024
Gunpowder River High Service Taps	25	5,500	.005	.009	.051	.025
Gunpowder River Low Service Taps	13	3,200	.0004	.0000	.001	.0000
Jones Falls High Service Taps	75	2,300	.006	.0008	.072	.0009
Jones Falls Middle Service Taps	50	600	.007	.007	.008	.003

TABLE No. 3.

Month.	Turbidity			Apparent Color			Oxygen Consumed.			Nitrogen As												Microscopic Organisms (Standard Units per c. c.)			Amorphous Matter (Standard Units per c. c.)		
										Free Ammonia.			Albuminoid Ammonia			Nitrites.			Nitrates								
	Montebello Influent	Montebello Effluent	Clifton Effluent	Montebello Influent	Montebello Effluent	Clifton Effluent	Montebello Influent	Montebello Effluent	Clifton Effluent	Montebello Influent	Montebello Effluent	Clifton Effluent	Montebello Influent	Montebello Effluent	Clifton Effluent.	Montebello Influent.	Montebello Effluent	Clifton Effluent	Montebello Influent	Montebello Effluent	Clifton Effluent.	Montebello Influent	Montebello Effluent	Clifton Effluent	Montebello Influent.	Montebello Effluent	Clifton Effluent
January	11	8	8	35	27	21	3.0	2.0	1.9	.023	.046	.064	.119	.079	.094	.006	.005	.003	1.01	0.93	0.93	......	......	......	3,400	3,900	4,600
February...	9	7	6	18	15	13	1.4	1.6	2.1	.052	.055	.077	.149	.074	.069	.005	.006	.002	1.03	1.02	1.02	......	......	......	5,000	5,500	3,600
March	14	7	6	39	20	16	2.6	2.0	1.6	.045	.063	.035	.099	.126	.084	.005	.006	.001	0.97	1.01	1.04	......	d 300	d 550	5,500	3,700	3,100
April	28	9	10	50	14	16	3.1	1.2	1.2	.028	.023	.024	.148	.086	.088	.003	.004	.001	0.66	0.74	0.72	......	a 60	a 70	......	5,500	4,200
May	40	8	8	85	12	16	4.1	1.7	1.4	.115	.044	.030	.183	.109	.085	.005	.005	.000	0.60	0.48	0.47	......	c m 65	......	......	5,000	7,000
June	43	7	11	70	11	15	3.0	1.2	1.3	.053	.048	.040	.162	.109	.080	.006	.004	.000	0.40	0.39	0.38	......	d 310	......	45,000	6,500	6,500
July	82	8	11	188	12	18	3.3	2.1	1.5	.059	.054	.037	.183	.076	.083	.004	.006	.000	0.42	0.41	0.45	......	m 36	k 300	85,000	10,000	11,000
August	95	8	9	138	12	14	3.3	1.2	1.3	.031	.029	.020	.170	.084	.079	.005	.004	.001	0.50	0.46	0.44	......	g 9	......	130,000	7,000	7,500
September	72	8	8	140	12	12	3.3	1.2	1.3	.038	.025	.023	.182	.056	.060	.005	.004	.001	0.64	0.41	0.34	h 10	r 100	......	60,000	5,500	8,000
October	110	7	6	200	10	11	4.8	1.9	1.4	.221	.049	.038	.242	.079	.077	.004	.003	.000	0.39	0.27	0.32	......	......	......	45,000	6,000	7,000
November.	60	7	7	100	10	12	3.5	1.6	1.2	.032	.030	.030	.155	.072	.068	.003	.003	.001	0.27	0.27	0.26	......	......	......	43,000	5,500	6,000
December...	11	5	5	24	9	9	2.2	1.4	1.2	.060	.035	.028	.094	.100	.079	.003	.005	.001	0.36	0.37	0.36	......	......	......	12,000	4,500	5,000
Average	48	7.4	7.9	91	14	14	3.1	1.6	1.5	.063	.042	.037	.157	.088	.087	.005	.005	.001	0.60	0.56	0.56	1	75	......	36,000	5,500	6,000

(a) Asterionella (c) Cladothrix (d) Cœlosphærium (g) Cyclops (k) Raphidium (m) Daphnia. (n) Dynobryon. (r) Vorticella

TABLE No. 4.

Month	Turbidity.			Apparent Color			Oxygen Consumed			Nitrogen As												Microscopic Organisms (Standard Units per c. c.)			Amorphoas Matter (Standard Units per c. c.)		
										Free Ammonia.			Albuminoid Ammonia			Nitrites			Nitrates.								
	Roland Effluent	Hampden Effluent.	Druid Effluent	Roland Effluent	Hampden Effluent.	Druid Effluent.	Roland Effluent	Hampden Effluent.	Druid Effluent	Roland Effluent	Hampden Effluent.	Druid Effluent.	Roland Effluent.	Hampden Effluent.	Druid Effluent	Roland Effluent.	Hampden Effluent.	Druid Effluent	Roland Effluent	Hampden Effluent.	Druid Effluent	Roland Effluent	Hampden Effluent	Druid Effluent	Roland Effluent	Hampden Effluent.	Druid Effluent
January	21	18	22	43	36	56	2.8	2.9	3.0	.039	.036	.042	.126	.066	.077	.035	.001	.001	1.07	1.02	1.04	a 30	a 50	c 75	9,000	3,700	6,500
February	12	6	7	28	13	16	2.0	1.6	1.6	.016	.035	.022	.068	.063	.051	.005	.000	.000	1.06	1.22	1.17	a 75	a 3	......	2,800	6,500	29,000
March	25	21	20	41	31	32	3.8	2.6	2.8	.037	.058	.050	.116	.091	.085	.004	.000	.000	1.01	1.02	1.06	c 65	......	a 2	16,000	38,000	32,000
April	45	66	37	87	104	56	3.9	3.4	2.2	.056	.046	.070	.119	.112	.132	.000	.000	.001	0.82	1.03	0.75	c 110	a 110	c 290	27,000	42,000	44,000
May	24	15	8	39	24	13	3.0	2.0	1.6	.053	.037	.092	.116	.103	.115	.000	.000	.002	0.63	0.64	0.62	c 46	......	c b 70	24,000	15,000	6,000
June	16	17	10	26	37	18	3.0	2.7	2.1	.112	.077	.127	.116	.135	.142	.003	.002	.005	0.29	0.35	0.35	c h 240	c 190	d 575	12,000	12,000	6,000
July	13	10	7	21	20	12	3.6	2.6	2.1	.138	.098	.142	.245	.141	.125	.000	.005	.009	0.13	0.18	0.22	c k 650	c 47	b 330	17,000	11,000	6,000
August	49	9	8	90	13	14	4.7	2.9	1.9	.202	.110	.119	.257	.188	.156	.005	.008	.011	0.10	0.17	0.20	c 250		......	7,500	6,000	5,500
September	31	11	7	50	26	14	4.8	3.4	2.2	.223	.130	.136	.252	.183	.093	.003	.015	.012	0.22	0.24	0.19	c 110	......	c b e f 390	25,000	10,000	4,500
October	19	27	7	57	73	11	3.2	3.1	2.6	.171	.188	.121	.171	.161	.144	.004	.005	.009	0.20	0.28	0.13	c g 140	......	b e 1,600	18,000	27,000	7,000
November.	16	9	5	21	16	9	3.4	2.8	2.2	.079	.142	.128	.159	.121	.106	.004	.004	.006	0.23	0.27	0.16	c 410	c 110	b e 430	8,000	7,500	4,800
December	17	12	7	27	20	11	3.1	2.7	2.4	.064	.069	.084	.159	.148	.152	.002	.002	.004	0.32	0.31	0.27	c 350	c 110	c 120	10,000	9,000	4,900
Average	24	19	12	44	34	22	3.4	2.7	2.2	.099	.086	.094	.159	.126	.113	.007	.004	.005	0.51	0.56	0.51	210	50	320	15,000	16,000	13,000

(a) Asterionella (b) Synedra (c) Cladothrix (d) Cœlosphærium (e) Melosira (f) Dictyosphærium. (g) Cyclops. (h) Sirosiphon (k) Raphidium.

TABLE No. 1.

Month.	Gr. per Gallon Aluminum Sulfate.	Parts per Million Available Chlorin.	Turbidity.			Apparent Color.			Bacteria per c. c., Growing at 37° C.				Bacteria per c. c., Growing at 20° C.				Montebello Influent.				Montebello Effluent.				Clifton Effluent.				Per Cent. Reduction M. I. to M. E.			Per Cent. Reduction M. I. to C. E.			Per Cent. Reduction M. E. to C. E.		
			Montebello Influent.	Montebello Effluent.	Clifton Effluent.	Montebello Influent.	Montebello Effluent.	Clifton Effluent.	Montebello Influent.	Montebello Effluent.	Clifton Influent.	Clifton Effluent.	Montebello Influent.	Montebello Effluent.	Clifton Influent.	Clifton Effluent.	B. Coli Communis.	B. Coli Communior.	B. (Lactis) Aerogenes.	B. Acidi Lactici.	B. Coli Communis.	B. Coli Communior.	B. (Lactis) Aerogenes.	B. Acidi Lactici.	B. Coli Communis.	B. Coli Communior.	B. (Lactis) Aerogenes	B. Acidi Lactici.	Bacteria Growing at 37° C.	Bacteria Growing at 20° C.	B. Coli Group.	Bacteria Growing at 37° C.	Bacteria Growing at 20° C.	B. Coli Group.	Bacteria Growing at 37° C.	Bacteria Growing at 20° C.	B. Coli Group.
January	.	0.65	11	9	8	29	26	21	270	75	.....	32	2,800	a 27,000	......	a 14,000	c 0.600	c 15.3	c 5.40	c 5.30	0.063	0.110	0.188	0.050	0.008	0.083	0.056	0.042	*71.48	. .	94.73	88.15	. .	99.28	58.44		50.17
February	. .	0.80	9	7	6	21	17	16	55	24	.....	12	5,500	750	......	14	0.084	0.470	0.085	0.063	0.177	0.009	0.069	0.050	0.000	0.000	0.000	0.000	57.14	86.48	56.55	78.57	99.75	100.00	50.10	98.17	100.00
March		0.85	8	6	5	19	17	16	36	32	.....	9	1,900	1,200	......	b 39,000	0.007	0.092	2.39	0.015	0.088	0.488	0.088	0.004	0.000	0.000	0.000	0.000	11.11	38.82	72.12	75.00	......	100.00	71.88		100.00
April	0.692	0.80	49	8	9	80	13	15	1,100	110	.....	16	8,500	4,800	......	b 11,000	6.00	2.00	3.01	4.00	0.127	0.143	0.196	0.054	0.001	0.001	0.005	0.011	89.40	43.30	57.76	98.48	.. .	99.88	85.71		96.89
May	0.532	0.80	38	7	7	56	11	11	600	140	13	27	13,000	1,800	15	b 2,100	0.000	0.110	3.88	3.44	0.460	0.510	1.11	4.27	0.007	0.001	0.047	0.082	77.19	92.94	14.54	95.54	83.83	98.14	80.43		97.83
June	0.803	0.85	44	6	10	75	11	15	170	160	34	10	1,100	470	95	85	0.220	2.40	1.78	0.880	0.000	0.004	2.56	0.128	0.004	0.005	0.040	0.001	1.21	58.03	49.02	93.93	92.33	97.40	93.25	81.72	94.91
July	0.931	1.00	83	8	11	138	12	17	280	47	20	10	950	180	42	12	0.071	0.280	2.22	17.2	0.053	0.096	0.288	0.477	0.000	0.003	0.001	0.001	83.04	81.09	8.97	96.39	98.72	99.37	78.72	93.26	94.98
August	1.237	1.50	79	8	9	131	12	14	470	55	11	5	7,000	90	14	3	0.220	12.4	7.56	56.8	0.085	0.890	1.02	0.130	0.000	0.000	0.007	0.004	88.82	98.78	95.39	98.94	99.96	99.94	90.57	96.59	98.79
September	1.207	1.75	93	8	8	162	12	13	850	90	1	1	6,500	140	1.5	2	6.76	1.11	10.3	4.97	0.588	0.472	0.929	1.04	0.000	0.000	0.001	0.005	89.03	99.75	86.48	99.88	99.97	99.97	98.91	98.60	99.80
October	1.144	2.00	78	7	6	165	10	10	750	60	0.6	0.4	850	110	0.3	0.3	6.37	17.8	25.2	7.66	0.961	0.965	0.542	0.511	0.000	0.000	0.000	0.000	91.54	87.34	94.77	99.93	99.99	100.00	99.35	99.71	100.00
November	0.633	1.75	45	7	6	75	11	12	2,200	160	0.8	3.0	15,000	2,100	1.0	0.9	1.10	2.43	3.52	3.05	0.125	0.954	1.26	0.087	0.000	0.001	0.000	0.005	92.06	86.31	75.98	99.91	99.99	99.94	98.16	99.99	99.75
December	0.604	1.50	19	6	5	36	9	8	200	42	4.1	0.9	31,000	28,000	5.0	1.1	0.060	0.100	6.05	0.170	0.050	0.150	0.460	0.090	0.000	0.000	0.000	0.000	79.10	11.24	88.24	99.05	99.99	100.00	97.86	99.99	100.00

(a) After growths resulting from former treatment at the impounding reservoir.
(b) After growths resulting from treatment at Montebello effluent.

(c) According to the classification adopted in the 1912 report of a committee of the American Public Health Association.
(*) Per cent. reductions, calculated with monthly averages carried to units place.

TABLE No. 2.

Month	Gr. per Gallon Aluminum Sulfate.	Parts per Million Available Chlorin.	Turbidity.			Apparent Color.			Bacteria per c. c. Growing at 37° C.				Bacteria per c. c., Growing at 20° C.				Roland Effluent.				Hampden Effluent.				Druid Effluent				Per Cent. Reduction R. E. to H. E.			Per Cent. Reduction R. E. to D. E.		
			Roland Effluent	Hampden Effluent	Druid Effluent	Roland Effluent.	Hampden Effluent	Druid Effluent	Roland Effluent.	Hampden Influent	Hampden Effluent.	Druid Effluent.	Roland Effluent.	Hampden Influent.	Hampden Effluent.	Druid Effluent.	B. Coli Communis.	B. Coli Communior.	B. (Lactis) Aerogenes	B. Acidi Lactici.	B. Coli Communis.	B. Coli Communior.	B. (Lactis) Aerogenes	B. Acidi Lactici.	B. Coli Communis	B. Coli Communior.	B. (Lactis) Aerogenes	B. Acidi Lactici.	Bacteria Growing at 37° C.	Bacteria Growing at 20° C.	B. Coli Group.	Bacteria Growing at 37° C.	Bacteria Growing at 20° C.	B. Coli Group.
January	a 0.617	1.50	23	19	22	52	46	55	390	95	95	100	10,000	b 2,800	b 6,500	b 3,800	0.420	12.4	0.440	0.430	0.000	0.000	0.000	0.004	0.000	0.000	0.004	0.001	*76.30	34.99	99.97	73.72	62.51	99.96
February	0.664	1.50	11	6	7	26	15	18	75	36	22	27	490	36	12	15	0.100	0.050	0.040	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	71.05	97.52	100.00	64.48	96.93	100.00
March	0.585	1.50	22	21	21	40	36	37	150	90	45	43	2,100	480	130	190	0.050	0.590	0.700	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	70.39	93.74	100.00	71.71	90.80	100.00
April	0.938	1.50	40	59	34	69	91	55	430	240	250	130	5,000	1,800	750	420	0.070	0.007	21.8	0.210	0.042	0.012	0.110	0.190	0.003	0.000	0.003	0.012	43.35	85.18	98.35	70.40	91.19	99.92
May	0.581	1.50	30	17	8	39	28	15	160	95	70	29	650	150	140	55	0.620	0.580	0.790	0.140	0.120	0.015	0.062	0.006	0.014	0.007	0.050	0.008	56.69	79.49	90.47	81.53	91.40	96.29
June	0.000	1.35	13	16	7	23	30	14	110	65	140	45	470	250	2,000	510	0.080	0.500	0.990	1.40	0.540	0.480	0.056	0.092	0.008	0.013	0.926	0.061	......		60.64	58.38		66.06
July	0.000	1.50	17	11	7	26	17	11	220	110	170	23	970	k 1,300	1,000	370	0.390	3.93	0.970	1.01	0.042	0.044	0.563	0.089	0.085	0.013	0.060	0.001	25.23		88.29	89.64	63.82	97.50
August	c 0.753	1.75	c 22	d 8	d 7	c 45	d 12	d 11	c 860	c 80	d 180	d 28	c 1,100	c 160	d 460	d 130	c 1.69	c 0.240	c 2.39	c 8.53	d 0.005	d 0.412	d 0.998	d 0.019	d 0.008	d 0.005	d 0.074	d 0.431	77.99	56.35	89.62	96.52	87.96	95.97
September	e 0.719	e 2.00	e 35	15	5	e 52	26	12	e 850	e 95	b 12,000	95	e 4,100	e 95	b 25,000	220	e 0.130	e 13.3	e 13.9	e 0.820	0.050	0.111	0.251	0.459	0.001	0.016	0.115	0.011	......	. .	96.91	88.63	94.57	99.49
October	f 0.694	f 2.00	f 29	20	6	f 78	60	10	f 650	f 55	600	38	f 4,200	f 23	2,500	100	f 0.006	f 0.880	f 14.3	f 8.10	0.012	0.720	0.102	0.014	0.007	0.001	0.098	0.007	3.50	39.58	96.36	93.95	95.22	99.47
November	g 0.430	g 1.75	g 12	9	4	g 21	14	8	g 210	g 50	50	13	g 1,800	g 450	b 15,000	b 600	g 0.064	g 1.26	g 0.241	g 0.664	0.555	0.001	0.018	0.056	0.005	0.001	0.001	0.017	75.85		71.74	93.74	65.63	98.92
December	h 0.000	2.00	15	10	6	25	22	10	140	35	43	13	18,000	k 800	430,000	20,000	0.000	0.480	0.890	0.400	0.000	0.009	0.005	0.001	0.001	0.001	0.001	0.001	68.61		99.15	90.51		99.77

(a) Started use of alum 4 P. M., January 29.
(b) After growths
(c) From August 1 to 15, when use of Lake Roland was discontinued.
(d) From August 15, water from Lake Clifton was mixed with remaining water.
(e) From September 11, when use of Lake Roland was resumed.

(f) To October 17, when use of Lake Roland was discontinued.
(g) From November 7, when use of Lake Roland was renewed.
(h) Use of alum in Lake Roland effluent (to Hampden influent) was discontinued November 30.
(k) Several high counts, probably due to water from the reservoir gaining access to the influent chamber.
(*) Per cent. reductions calculated with monthly averages carried to units place.

APPENDIX No. 6

Loch Raven Planting Plan.

(From Field Notes Made During Summer 1913).

Purpose.

This planting plan is a portion of a working plan which is to be drawn up for the management of the area of the water-sheds of the city's water supply at Loch Raven, Md.

The purpose of this plan is to establish a commercial forest on this water-shed, and to establish protective border plantings around the margin of the new impounding reservoir.

Only a small portion of the area of the water-shed is now covered with any sort of a forest formation, and the greater part of the area above the final "flow line" comprises good open farm land. In the planting, an effort will be made to afforest the area with our most valuable conifer. White pine has been chosen as the principal tree, because of its high technical quality, its rapidity of growth and its ease of management. (This seems to be somewhat far south for the optomum development of this conifer, but from the character of individuals of the species already growing on the area, it is safe to predict that the planting will be safe in this latitude.)

White pine adapts itself admirably for use on water-sheds, for it forms a cover rapidly, and early furnishes the protection from erosion and silting, which is so essential. A few of the most valuable hardwoods will be used to supplant the white pine, and in locations indicated on the map or later in this plan. The hardwoods which will be used are tulip, red oak and ash.

Border Planting.

A border planting will be established around the margins of the main water bodies. This planting will be four tree-spaces wide, or about 25 feet. White pine, Norway spruce and Eastern hemlock will be used in the mixture. Pine and spruce should form 40 per cent. each of the plantings, and hemlock the remaining 20 per cent. The hemlock is recommended because of its tolerance. The species will establish itself under the other species and form an under-story, which will not only be desirable from an aesthetic point of view, but will also form an effective barrier to leaves, debris, etc. The lower margin of the border planting will be 10 feet away from the final "flow line" (237). This leaves a narrow strip of land which would look well under grass.

Need of a Forest on the Water Shed.

The Gunpowder River serves as the boundary line between a large portion of Baltimore and Harford Counties—two of Maryland's most fertile agricultural counties. The drainage area of the river is, therefore, not protected to any appreciable extent by forest covers throughout the greater part of its course, and as a consequence, heavy storms now bring down large amounts of silt and other undesirable material. The city's land will eventually reach as far west as Cockeysville, and the establishment of a forest will, therefore, protect the drainage area for the last ten miles of its course. This protection will not only mean pure water, but the gradual "paying out" or equalization of the flow, the preventing of erosion on the steeper areas, and the formation of an attractive woodland which eventually can be lumbered at a profit.

Stock Used.

No attempt will be made to grow any stock from seed. The white pine will be purchased from New England forestry companies and placed directly in the field or in the nursery, where it will be held for a short time.

The hardwoods will be purchased as seedlings and held in the nursery for a short time. A small stock of pine and hardwoods will be held in the nursery to replant the failures and to produce larger stock for border plantings.

"Planted" Areas.

Transplants Required Per Acre.

Transplants will be spaced six feet by six feet. With this spacing, 1,210 transplants are required per acre. In case of a mixture, the proportion of each species will be given under the discussion of the area in question.

Size of Plants Best to Use.

The transplants are to be two-one stock: That is they have spent two years in the seed bed and one year in the transplant bed. This has proved to be the best stock, for such plants have stalky stems and fibrous root systems.

Method of Planting.

A mattock should be used in the operation. The sod for one square foot is cleared away from the proposed planting spot. The mattock should be buried at the edge of the space, and in such a manner that when the handle is pushed away from and to the right of the operator the edge will come to the surface in the center of the space. In the opening thus made a plant is put with the left hand, great care being taken to spread out the roots and to put them well down under the surface. The mattock is now released, the plant straightened and the earth packed about the roots with several vicious jabs with the heel. This is considered the fastest method of planting transplants. The rows should be kept parallel by the use of stakes as guides.

Treatment of the Site Prior to Planting.

Many of the sub-compartments are (as shown by the map) open farmland areas, and practically the only treatment required before planting will be that given under "Method of Planting."

Time of Planting.

The planting should be done as early in the spring as the frost is out of the ground. By this early work, advantage can be had of the rains of April and May, and the plants should be well rooted before the drying periods of summer.

Experience has shown that it is reasonable to expect a loss of at least 10 per cent. of the transplants set out. For filling blanks two-two stock is preferable, that is two-one stock which has been held in the nursery for a year.

Progress of the Planting.

The Dulaney Valley and Sweet Air Turnpike serves to divide the tract roughly into two compartments. The areas east of the Dulaney Valley will be planted first, and work is to begin here in the spring of 1914. This portion of the plan covers only 441.75 acres, but will be enlarged upon as rapidly as possible. The planting work done each season will depend upon the available labor and the length of the planting season.

Present Vegetation.

The largest amount of existing woodland on the Loch Raven tract is to be found on the rougher topography east of the proposed bridge. This woodland is of the "mixed hardwood" type, the following species being found: chestnut, chestnut oak, black and red oaks, tulip and pignut. The forestry attention necessary to put these areas in proper condition will be given in the working plan. Agricultural grasses form the principal ground cover of a large portion of the area and is the chief factor tending to retard the development of the young plants.

Mapping.

The areas to be planted have been divided into sub-compartments to facilitate referencing in the office. Roads, streams and vegetation cover have served as lines of division.

List of Sub-compartments.

	Acres.
10a	45.0
10b	118.8
10c	14.7
9a	41.8
9b	34.92
9c	87.2
9d	22.1
6a	4.6
6b	8.5
6c	9.2
6d	4.6
6e	18.4
6f	17.2
8a	8.5
8b	10.8
Total	441.75

(10 a)—This sub-compartment is bounded by the "flow line" and the proposed new road on the map. The area of the tract is 45 acres. At present a growth of rag weeds covers the ground, this having followed a crop of corn-ground wheat. The soil is somewhat clayey, but fertile and well drained. It is an excellent planting chance.

Recommendations—A border planting of pines, spruce and hemlock will be established along the "flow line" as described previously in this plan under "Border Planting." Use white pine over the entire area, except along the Dulaney Valley Branch. Here use red oak, tulip and ash in 50 per cent. mixture, with the pine for 100 feet on each side of the stream. Do not plant until the proposed road is completed. Plants required, 54,450.

(10 b)—Area very similar to 10 a. Same quality of soil and drainage. Use white pine in pure planting. Plant an occasional hard maple, hickory or white ash, in scattered fashion. Not over five per

cent. of these to be used in the planting. Area, 118.8 acres; plants required, 143,748.

(10 c)—Open farm land; rich soil; gentle slope to east. Use pure white pine, except for the border planting. Area, 14.7 acres; plants required, 27,387.

(9 a)—Open grass land, resulting from removal of crop of clover hay, summer of 1913. Good planting chance. Well drained, fertile soil. Few scattered old trees, which will not interfere with planting. Remove them later.

Recommendations—Use white pine, except along stream, with 10 per cent. of white ash or sugar maple. Use 10 per cent. tulip on area bordering the stream. Area, 41.8 acres; plants required, 50,578.

(9 b)—A gentle western slope, draining into Dulaney Valley Branch. Good fertile soil, quality No. 1. Open area. Covered with wheat stubbles or weeds. An orchard is present. Plant under these trees and remove old trees later.

Recommendations—Plant with pure white pine. Scatter 15 per cent. of red oak and tulip. Leave old Cromwells Bridge open as a fire line. Area, 34.9 acres; plants required, 41,229.

(9 c)—This area is the highest point on the east side of the Dulaney Valley. There is an abrupt slope to the west, which is covered at this time with sedge grasses and scrub pine (Pinus Virginiana) reproduction. A site which should be given early attention because of the character of the soil and topography. There is a small woodland area here.

Recommendations—Use hardwoods (sugar maple, hickory, red oak) on the knob in equal mixture—pure white pine over rest of area. Do not plant in the woodland area. This area will be handled as explained later in "The Working Plan." Area, 82.7 acres; plants required, 100,067.

(9 d)—Open grass land. Hay crop removed summer of 1913. Good soil and drainage. Good planting chance. No obstacles to planting. Few old scattered trees, which may be removed after planting.

Recommendations—Use white pine. Scatter few hardwoods (tulip and ash) with the pine. (Not to be more than five per cent. of these in planting.) Do not plant until after proposed road is completed. Area, 22.1 acres; plants required, 26,740.

(6 a)—Field of buckwheat in 1913. Small orchard. Good soil, draining into Dulaney Valley Branch.

Recommendations—Use tulip and ash in 50 per cent. mixture. Area, 4.6 acres; plants required, 5,560.

(6 b)—Low-lying, flat area. Very rich soil.

Recommendations—Use tulip and ash in 50 per cent. mixture. Area, 8.5 acres; plants required, 10,285.

Make border planting around the edge of water body, as given earlier in plan. Do not plant until proposed road is completed.

(6 c)—Area in corn, summer of 1913. Clean land, no obstacles to planting; good soil; eastern aspect good drainage.

Recommendations—Use pure white pine over entire area. Make border planting. Area, 9.2 acres; plants required, 11,132.

(6 d)—Tilled soil. Wheat planted fall of 1913. Quality of soil and drainage same as 6 c.

Recommendations—Use pure white pine, as in 6 c. Make border planting. Area, 4.6 acres; plants required, 5,566.

(6 e)—Excellent site, practically level. No vegetative obstacles. Fertile soil. Crop of hay removed summer of 1913.

Recommendations—Make border planting. Use white pine over entire area. Scatter 10 per cent. of tulip and ash in regular fashion. Area, 18.4 acres; plants required, 22,264.

(6 f)—Site same as 6 c, except that crop of corn is growing. Rolling to level. Clayey soil.

Recommendations—Use pure white pine over entire area. Area, 17.2 acres; plants required, 20,812.

Note—The Dulaney Valley and Sweet Air Turnpike, which forms the western boundary of sub-compartments 6 c, 6 d, 6 f, 8 a and 10 c, should be maintained as a fire line.

(8 a)—Cultivated field; being prepared for wheat or hay. A corn-ground wheat field ploughed.

Recommendations—Use white pine. Scatter 10 per cent. tulip through the portion nearest the water body. Make border planting. Area, 8.5 acres; plants required, 10 285.

(8 b)—Old pasture field. First sub-compartment to be planted in spring of 1913.

Recommendations—Use white pine with 40 per cent. hard maple. Area, 10.8 acres; plants required, 13,068.

Respectfully submitted,

R. Brooks Maxwell, *City Forester.*

APPENDIX No. 7

Report of the Pitometer Survey.

EVAN RINEHART, Engineer in Charge.

Mr. Ezra Whitman,
Water Engineer.

Dear Sir—The pitometer survey for the reduction of water waste and leakage started work in May, 1913. Its duties include:

(1) Night surveys of mains and connections for underground leakage.

(2) House-to-house inspection of water fixtures and service pipes.

(3) Designating for metering, such places as apartment houses, etc., that have large consumption.

(4) Reporting cases of miscellaneous water waste by street contractors, etc., for warning by the Water Engineer that their licenses will be revoked if the waste is not stopped.

(5) Compiling consumption data and curves.

Results.

A saving of about three million gallons per day, the value of which in pumpage and treatment, is 168 per cent. on the investment, or cost of the work. The work was mostly in Western High Service.

Records of actual pumpage, allowing for slip of pumps, before and after the survey, show a decrease of 4½ million gallons per day, bringing the Western High Service down to 13.8 million gallons per day, which was lower than it had been for years. Allowing 1½ million gallons per day, Eastern Station, pumping due to connecting Mount Royal, leaves a net saving of three million gallons per day. Survey records, allowing for leaks detected and repaired, show about two million gallons per day. The difference is due to the fact that 114 consumers of large amounts were reported for metering, that some work was done in cutting down waste by street contractors, and that every household inspected was warned about wasting water.

From a consumption chart (1910-1913): All the services, except the Western High Service, show the expected increases in consumption per day, as high as 18 per cent. (united service) for 1913 over 1912. The Western High Service, where the pitometer survey worked, decreased in average daily consumption, in spite of the large consumption by sewer manholes and the amount of work done by public contractors.

Taking three million gallons per day saved, at eight dollars per million gallons for pumping, treating and overhead charge, gives the value of the water saved as $8,760 per year, at a cost of $5,200. If the cost is considered of installation of plant, depreciation, etc., the saving is much higher. At the prevailing meter rates it would be about $85,000.

Sources of Leakage and Waste.

Leakage.

(1) Joints on mains, abandoned supplies, split services, electrolysis.

(2) House fixtures: Faucets, water closets, piping inside.

The records show that defective house fixtures are responsible for about 65 per cent. of the total leakage; broken services and private pipe for about 20 per cent., and leaks on mains, valves, hydrants, fountains and blows, for the remaining 15 per cent.

Waste.

(1) House fixtures: Automatic and continuous flush closets, non-automatic cellar drainers, domestic use of water in excess of actual needs.

(2) Manholes fitted with non-automatic drainers, street and building contractors using water greatly in excess of their actual needs.

The leakage and waste for the entire city is estimated at 19 million gallons per day.

Procedure of Work.

The section of the city surveyed was divided into districts of about one square mile. Taking a district survey, the preliminary measurement consisted in shutting off for one night all mains entering and leaving the district, excepting one feed main, and by means of a pitometer on the feeder, measuring the night flow of the district. Taking the flow from midnight to four o'clock in the morning, and deducting properly for fountains, horse-troughs and legitimate use, leaves the remainder classed as leakage and waste. The pitometer recorder chart, when calibrated, gives a visual record in gallons per day.

The house-to-house inspectors were then sent into the district, serving notices to repair leaking house fixtures and services. Each notice was personally handed to the tenant by the inspector. When all visible leaks had either been repaired or shut off, another survey of the district was made at night. By cutting out block by block, and noting the corresponding drop in the total flow, the night rate of each block was determined.

Consumption that could not be accounted for by the house-inspection reports was traced until located. Listening with an aquaphone on a hydrant key at the curb-cocks was effective when the curb-cocks were accessible, but in some cases it was necessary to strip the main.

Curb-Cocks.

The quickest and cheapest way to follow up a large flow at night in any particular block, would be to shut off the curb-cocks in order, noting the corresponding drops in the flow. This would locate all leakage as inside or outside the curb, and leaks on the mains could be readily traced. However, in this city, only a small proportion of the curb-cocks are available for use. In most cases, the curb-cock box is buried or plugged with concrete, brick-bats or dirt, or else there is no box enclosing the curb-cock, which is covered by the sidewalk. Also the curb-cock box that has been installed by the city for a number of years is of too small diameter for cleaning or working the curb-cock with the ordinary hydrant key. Shutting off a house at the curb-cock invariably means digging up the box and breaking the cement sidewalk. In cases of services broken inside of the curb, this often means a cellar flooded before the stop at the curb can be shut off, or else the time and expense of shutting down the main and pulling the ferrule.

I recommend that the property-owner be held accountable that the curb-cock is always accessible for use. With this end in view, a force could be organized to overhaul and install curb-cock boxes throughout the city, placing on the water bill of the property-owner the charge of the work involved, which would be about three dollars as a maximum for the installation of a new box.

Another method of tracing leaks on mains, by exposing the pipe at intervals, and listening with an aquaphone, is not desirable, because of the necessity of tearing up improved pavement.

The survey contemplates using for night work, a meter mounted on a wagon and fitted with several hundred feet of 2½-inch hose and connections for fire plugs. The plan is to feed the block tested from a fire plug on a main isolated from the one under test, through the hose and meter to a fire plug on a main in the block under test. This method is desirable because of the cost of each pitometer manhole and the official disfavor of breaking into improved paving, for installing pitometer taps. It also keeps the men working the valves in closer touch with the operator reading the flow.

The limited appropriation did not allow a very extensive night survey for underground leakage, and only about 50 leaks on the mains of any size, that did not come to the surface, were detected. Of the some thousand leaky joints which were repaired in the past year by the Water Department, the largest proportion of them showed on the surface, and in most cases, not far from the leak. However, with the big increase of improved paving, on concrete base, the proportion of leaks on mains which will follow underground channels to sewers or manholes, will increase rapidly unless caught up by the pitomer survey. Moreover, leaks of this character will do considerable damage by excavating under the improved paving before being discovered.

House-to-House Inspection.

Each inspector, properly equipped with a Department badge and a letter of instructions, goes from house to house in an assigned district and inspects all house fixtures. He then shuts off the cellar water stop and listens with an aquaphone for the sound of a leak on the service pipe. If there is a water fixture or service leaking about 100 gallons per day or over, the inspector hands to the tenant a notice giving the nature of the leak and stating that if repairs are not made in seven (or less for large leaks) days, the water will be turned off. A duplicate of the notice is turned in to the chief inspector, who shuts off the water if the repairs are not made in the stated time.

The daily report made by the inspector, a block of houses to a sheet, gives the type of building, number of inmates, location of cellar drainers, etc. This report is filed at the City Hall office for reference in the nightwork following the inspection. The record for the past year shows:

Number of buildings inspected	40,000
Number of leaking fixtures repaired	4,891
Number of supplies turned off for failure to repair	139
Cost of inspecting one building, inc. overhead charges (cts.)	5
Number of houses inspected per man per day	80
Extent of work (in square miles)	4

Tabulation of Leakage.

Number of leaking faucets repaired	2,155
Number of leaking water closets repaired	2,607
Number of leaking house boilers repaired	15
Number of leaking inside pipe and fittings	40
Number of leaking curb-cocks and hose connections	9
Total number of leaking house fixtures	4,826
Number of leaking private pipes repaired	48
Number of leaking supply pipes (inside curb)	65
Number of leaking supply pipes (outside curb)	7
Total number of leaking pipes repaired	120
Number of leaks on mains repaired	37
Number of services turned off for failure to make repairs	139
Number of places with large consumption reported for metering	114
Number of fixtures and premises found not paying water rent, reported to Collector of Water Rents and Licenses	42

Balance Sheet.

SAVING.

Three million gallons per day at $8 per million gallons		$8,760 00
EXPENDITURES.		
Labor	$2,400 00	
Engineering and inspection	2,100 00	
Material	700 00	
Total		5,200 00
Net saving		$3,560 00
Per cent. on investment		168.4

Personnel.

Pitometer engineer, assistant, one foreman, four laborers, five inspectors.

Instruments and equipment—

One Lanham electric pitometer recorder	$450 00
Two Municipal Supply Company pitometer rod meters	130 00
One "U" tube recorder	25 00
One set of hydrometers	5 00
Two five foot by seven foot portable offices	140 00
*Tools, valve keys, etc	200 00
*Office furniture, typewriter, etc	250 00
Blank forms and stationery	50 00
Total	$1,150 00

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*Property of the Department.

Miscellaneous Water Waste.

Non-Automatic Cellar Drainers or Syphons.

The total number of these in the city is not known; a minimum estimate gives 500. Most of these run as high as 3,000 gallons of city water per day. Syphons have been measured, running 8,000 gallons per day. Moreover, while they will be pumping the ground water for only a few hours in the day, they will be using city water throughout the entire 24 hours. At 3,000 gallons per day, this would amount to $87.60 if metered. The cost of the necessary valve and ball cock to change the non-automatic cellar drainer to that which automatically shuts off when the water has been drained, is five dollars to the plumber, and from eight to ten dollars to the property-owner.

The city is not only losing the revenue that it could charge for this water, but is also pumping a great deal of water and treating it with chemicals at an annual cost of from $1,800 to $2,400, depending on the number of non-automatic syphons in use. This cost will be doubled with filtration. Eighty per cent. of this cost is absolute waste, which could be prevented by compelling the installation of automatic attachments. With filtration, the cost of the above waste, capitalized, will amount to about $48,000.

Automatic or Continuous Flush Closets.

With the automatic type of water closet, the tank fills, flushes, and fills again, keeping this up throughout the entire 24 hours, at intervals of 45 seconds and longer. With the continuous-flush type, the water keeps running through the trough throughout the entire day. Closets of these types have been found to run 5,000 gallons per day, each. A great many are still in use, particularly in public and school buildings, having been installed under the mistaken idea that they are more sanitary than the usual type. The only remedy for buildings equipped with such a type of closet, if not publicly owned, is to either meter them or to compel the removal of the automatic attachments, under penalty of having the water shut off.

Public Waste of Water.

The public buildings are universally fitted with water fixtures that are extremely wasteful. This is particularly true of schoolhouses and of larger buildings, such as the Court House. This waste is largely due to the use of automatic flush closets as described above and other attachments, such as urinals and drinking fountains, continually running. Below are given some typical cases:

1. City Jail—Per capita, 620; consumption per day, 450,000 gallons; value at meter rates per year, $13,140.

2. Court House—per capita, 130; consumption per day, 130,000 gallons; value at meter rates per year, $3,796.

3. School No. 71—Per capita, 520; consumption per day, 36,300 gallons; value at meter rates per year, $677.

Considering that 45 gallons per capita (per person per day) is ample for every purpose of domestic use—washing, drinking, cooking and sanitation, it is clearly evident that public buildings waste from 60 to 95 per cent. of the water consumed. The total amount of water used in the city for public purposes is about 10 million gallons per day. Of this, at least six million gallons per day can be saved by, first, draining Electrical Commission and other manholes into sanitary sewers; second, installation of improved water fixtures and plumbing; third, metering and supervision of all water used by street and building contractors and by the Department of Street Cleaning. The six million gallons per day waste will cost the city about $26,000 per year and will increase as the present fixtures and equipment grow older.

Consumption.

The average consumption for 1913 was 75.18 million gallons per day. From the information on hand, this daily consumption is distributed approximately as follows:

	Million Gals. per Day.
Industrial and commercial	22
Domestic	24
Public use	10
Leakage and waste	19
Total	75

With the completion of the new Filtration Plant, the water will cost the city, exclusive of installation of plant, depreciation, etc., about $12 per million gallons for pumpage and filtering (two-thirds of entire supply will be by gravity). This gives an annual loss to the city from leakage and waste of water of $83,220, or about 2.25 cents on the tax rate.

The remedy for this waste is:

(1) Regulations for the public use of water as above mentioned.

(2) A permanent pitometer survey, with appropriations sufficient to allow of the survey of each main once a year and the inspection of each non-metered building three times each year, about $35,000.

(3) By newspapers and other means calling attention to the fact that the public pays for senseless waste of water on the tax bill, if not on the water rent.

In addition to these methods of prevention, there is that of metering all premises, which in itself is the most valuable aid to the reduction of leakage and waste.

As a comparison, and to show the importance that other cities attach to pitometer survey work, the following are some of the yearly appropriations:

Washington, D. C.	$38,000
Chicago, Ill.	163,147
Philadelphia, Pa.	84,000

Condition of the System.

Valves.

It is necessary to overhaul or clean the box of the majority of valves handled. A number of the valves have not been turned over for such a long time that the packing has hardened so that the stuffing box leaks considerably when the valves are worked. It is necessary at times to drop back several blocks before getting a tight shut-off, due to valves leaking through or to being covered over by dirt from trenches. The locations of valves, as shown on the office plats, are often misleading, unless the square has been measured up recently. All of this makes slow and costly work in getting a shut-off, especially in times of bad leaks or breaks on the mains. The recommendations for a division for the inspection and repair of all valves, particularly those ahead of improved paving has been embodied in a special report of August 12.

Fire Hydrants.

At present, in addition to the members of the Fire Department and Water Department, the street cleaning employees, sewerage contractors, and the paving contractors, are all allowed to take water from fire hydrants. It is a common practice to use Stilson wrenches, monkey wrenches, or anything except the plug key in turning on and off the water from these plugs. As a result, there are a number of fire hydrants throughout the city with stems so rounded and mutilated that they cannot be worked with the ordinary plug key. Also, the Water Department spends several thousand dollars each year on repairs to these plugs, the result of careless handling, failing to shut them off, etc.

Plans for 1914.

With the appropriation of $15,000 for 1914, the force will be increased by a draftsman, eight inspectors, one foreman and five laborers. With this force it is hoped to clean up the Low Service and the most of the Middle Service before the end of the year.

Appended is a curve of a four-day run on Low Service, showing the hourly fluctuations and also the leakage. Also photographs of various types of leakage.

Yours respectfully,

EVAN RINEHART,
Engineer in Charge of Pitometer Survey.

SAMPLES OF FORMS USED

WATER DEPARTMENT, - - CITY OF BALTIMORE.

PITOMETER SURVEY.

To the occupant and
to the owner of ......1782 Harlem Ave.........

Notice is given that there is waste water in the above premises due to Leaking Faucet in Kitchen

....

If not repaired as required by law (City Code, 1893, Article 54), in Seven (7) *days, the water will be turned off.*

EZRA B. WHITMAN, Water Engineer.

Dec. 26,....*1913.* ......H. M.........*Inspector.*

WATER DEPARTMENT CITY OF BALTIMORE.

PITOMETER SURVEY

To the occupant and
to the owner of......1792 Harlem Ave.........

Notice is given that City Code, (Art. 54) requires the STOP COCKS on Water Service Pipes to be suitably BOXED and MARKED with either three bricks on edge or an Iron Box to grade.

Stop Box must be kept in condition to permit of the STOP COCK BEING WORKED AT ANY TIME.

Please have... New Curb Stop Box installed.... to the Water Service Stop Cock on your property.

If not complied with in Seven (7).... *days, the water will be* TURNED OFF.

EZRA B. WHITMAN, Water Engineer.

Dec. 26,....*1913.* ......H. M.................*Inspector.*

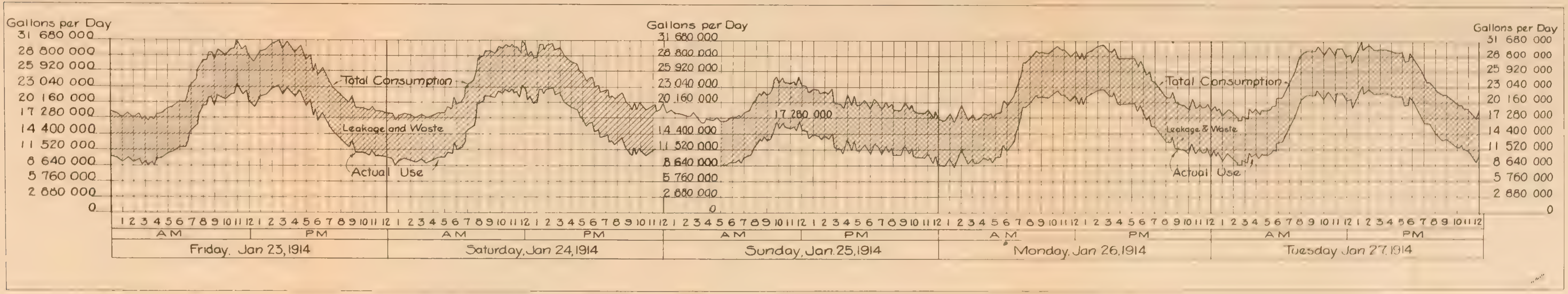
CITY OF BALTIMORE. WATER DEPARTMENT.

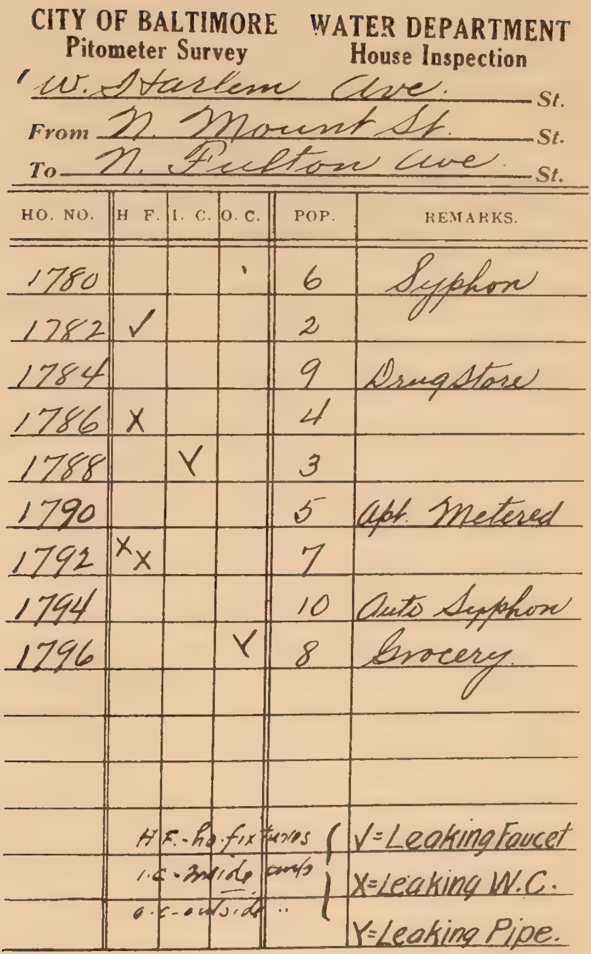
PITOMETER SURVEY

CONSUMPTION BY HOURS LOW SERVICE

Square miles area Low Service	4.50
Length of mains in miles	180.00
Average Pressure in pounds per sq in	40.00
Metered Consumption in Million Gallons per Day	9.50.
Type of Buildings - Manufacturing, Office, Railroad Yards, Piers, 2 story Dwellings, etc	
Aproximate population	200,000.

Item	Friday	Saturday	Sunday	Monday	Tuesday
Maximum	31 680 000	31 680 000	25 256 000	29 568 000	31 680 000
Minimum	16 388 000	17 280 000	15 840 000	15 840 000	17 952 000
Average	24 165 000	23 658 000	19 747 000	23 548 000	23 760 000
Max/Avg	132%	134%	128%	125%	133%
Min/Avg	68%	73%	80%	68%	76%
Min/Max	52%	54%	63%	54%	57%





CITY OF BALTIMORE WATER DEPARTMENT
Pitometer Survey House Inspection

'W. Harlem Ave. St.
From N. Mount St. St.
To N. Fulton Ave. St.

HO. NO.	H F.	I. C.	O. C.	POP.	REMARKS.
1780				6	Syphon
1782	✓			2	
1784				9	Drug Store
1786	X			4	
1788		Y		3	
1790				5	Apt. Metered
1792	XX			7	
1794				10	Auto Syphon
1796			Y	8	Grocery

H.F.-ho. fixtures
I.C.-inside closets
O.C.-outside "

✓=Leaking Faucet
X=Leaking W.C.
Y=Leaking Pipe.

FILE NO 801-A-1. ENTRY NO. 2055.

CITY OF BALTIMORE PITOMETER SURVEY WATER DEPARTMENT

DISTRICT SUMMARY

DISTRICT	SEVEN DAYS CONTINUOUS RECORD STARTED		August 23, 1913.
A-5	SUB-DIVISION SURVEY STARTED		August 23, 1913.
	" " " FINISHED		September 15, 1913.
	WATER WASTE DETECTED AND REMEDIED		120,000 Gal.
	TOTAL COST OF DISTRICT SURVEY		$440.00
	" VALUE OF WATER WASTE $0.08 PER 1000 GAL.		$3,504.00
	MEAN DAILY CONSUMPTION gals. per 24 hrs.		340,000 Gal.
	MINIMUM NIGHT " " " " " "		230,000 Gal.
	RATIO NIGHT " "		
	PER CAPITA " " BEFORE SURVEY		91 Gal.
	" " " " AFTER		61 Gal.
TOTAL NIGHT FLOW DETECTED BY SUB-DIVISION TESTS			220,000 Gal.
"	" DUE TO MUNICIPAL BUILDINGS		
"	" " " " HORSE TROUGHS AND FOUNTAINS	80,000	
"	" " " " PUBLIC CONVENIENCES	5,000	
"	" " " " ACTUAL USE BY CONSUMERS	15,000	
"	" " " " ACTUAL USE		100,000 Gal.
DIFFERENCE DUE TO LEAKS			
10 "	" INSIDE FIXTURES METERED	2,000	
414 "	" " " " UNMETERED	68,000	
424	TOTAL		70,000 Gal.
4 "	" " SERVICE PIPES	23,000	
5 "	" " JOINTS ON MAINS	15,000	
4 "	" " FIRE PLUGS	4,000	
"	" " PUBLIC HYDRANTS		
4 "	" " VALVES AND BLOWOFFS	8,000	
TOTAL DUE TO UNDERGROUND LEAKAGE			50,000 Gal.

		METERED	UNMETERED	TOTAL
POPULATION	RESIDENT			
	FLOATING	150	3,521	3,671
BUILDINGS	DWELLINGS		991	
	GARAGES		2	
	FACTORIES			
	HOTELS AND APARTMENTS	10		
	MUNICIPAL BUILDINGS			
	WAREHOUSES		1	
	RESTAURANTS			
	MISCELLANEOUS			
TOTAL		10	994	1,004.

FILE No. 801-D-1.
CITY OF BALTIMORE

ENTRY No. 16
WATER DEPARTMENT

PITOMETER SURVEY

PIPE TRAVERSE - DISTRICT A, DIVISION 1, ON 6 INCH H SERVICE

LOCATION N. Carey St. 20' South of S.B.L. of North Ave.

DATE May 16, 1913.

TIME AM ~~PM~~ 11.00

COMPUTED BY E.W.R.

Field Operator C.W. Keefer
Make of rod Mun. Sup. Co.
" " recorder "U" Tube
Diameter Used 6"
" Outer $7\frac{1}{4}$"
Thickness Shell $\frac{5}{8}$"
Liquid used CCl_4
Sp gr. of " "x" = 1.25 at 70°F.
Formulae for temp. correc. 1% for ± 20°
Temp. corr for this trav Negligible.
"r" = coef of rod .83
Area of Pipe .1964 sq. ft.
$k = r\sqrt{2g(x-1)}$ = .83 x 8.02 $\sqrt{1.25-1}$ = 3.34
℄ vel. = $k\sqrt{h}$ = 1.67
Mean Vel. = $\frac{\text{Total Quantity}}{\text{Area of pipe}}$ 1.42
Coef "C" = $\frac{MV}{℄V}$ for this dia. " = 0.85
Coef "C" on dia " " =
" "C" mean =
Traverse taken on 1 diams.

H
Looking So.

RING	DIAMETER Inner / Outer	DIAMETER Mean	AREA	VELOCITY Upper / Lower	VELOCITY Average	QUANTITY
A.	2"	2"	.0218	1.56 ~~1.67~~ 1.61	1.61	.0350
B	2" 4"	3"	.0655	1.48 1.54	1.51	0990
C	4" 6"	5"	.1091	1.30 1.35	1.33	.1450
D						
E						
F						
G						
H						
I						
J						
Total Quantity						.2790

Condition of pipe.
Good, no incrustation.

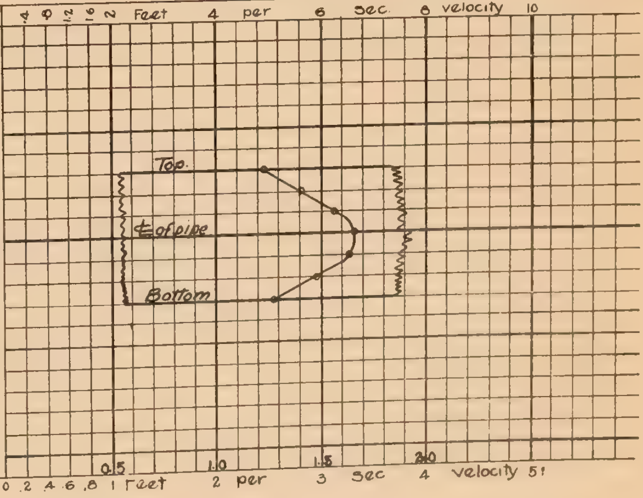
Remarks
C.L. Vel. and 1" up and down is used for ring A.

Temp. F°
Start 82°
Stop 84°
Mean 83°

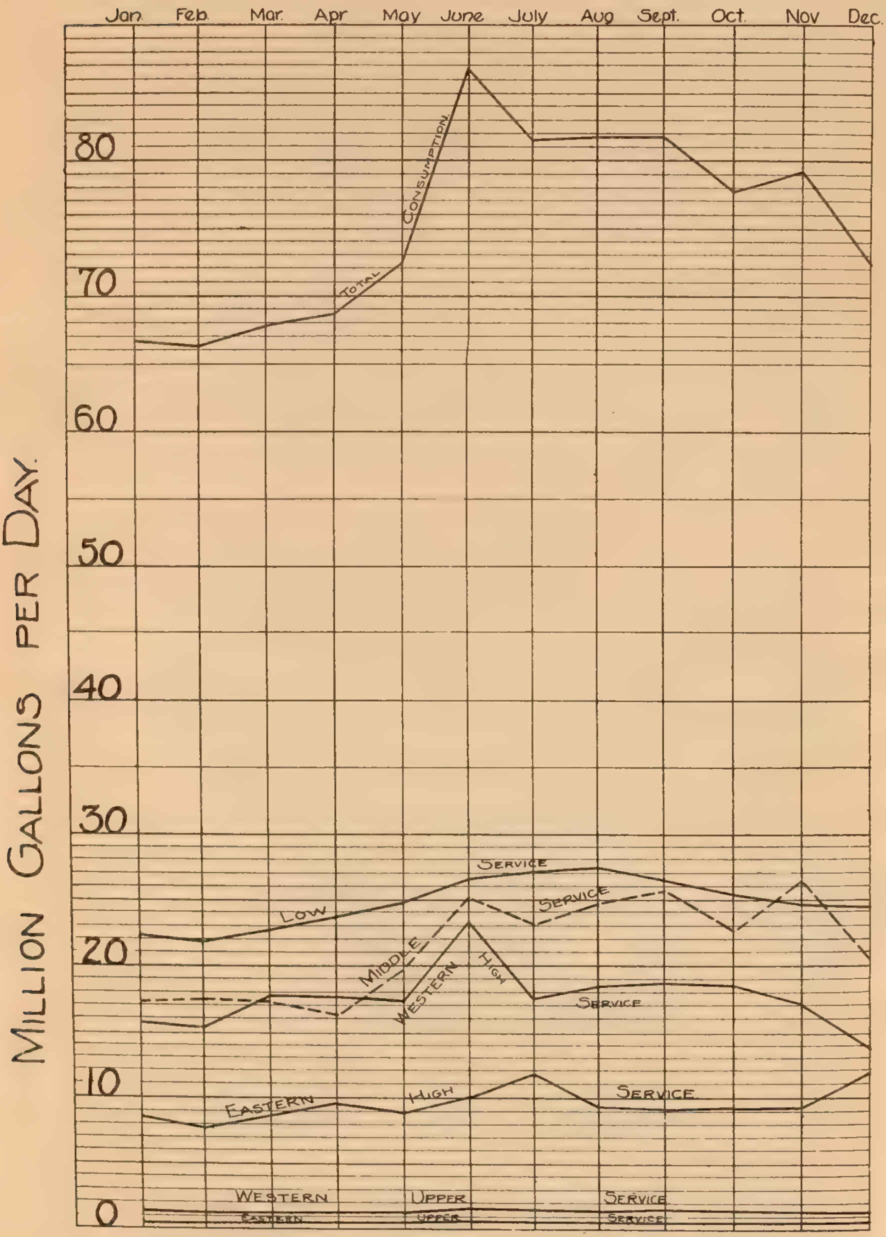
For Traverse on diameter
See File No. Entry No.

Deflec. "h"	$\sqrt{h}$	$k\sqrt{h}$	Rad
			9"
			8"
			7"
			6"
			5"
			4"
.1330	.360	1.20	3"
.1770	.420	1.40	2"
.2163	.465	1.56	1"
.2500	.500	1.67	℄
.2319	.482	1.61	1"
.1875	.432	1.46	2"
.1345	.370	1.27	3"
			4"
			5"
			6"
			7"
			8"
			9"
			10"

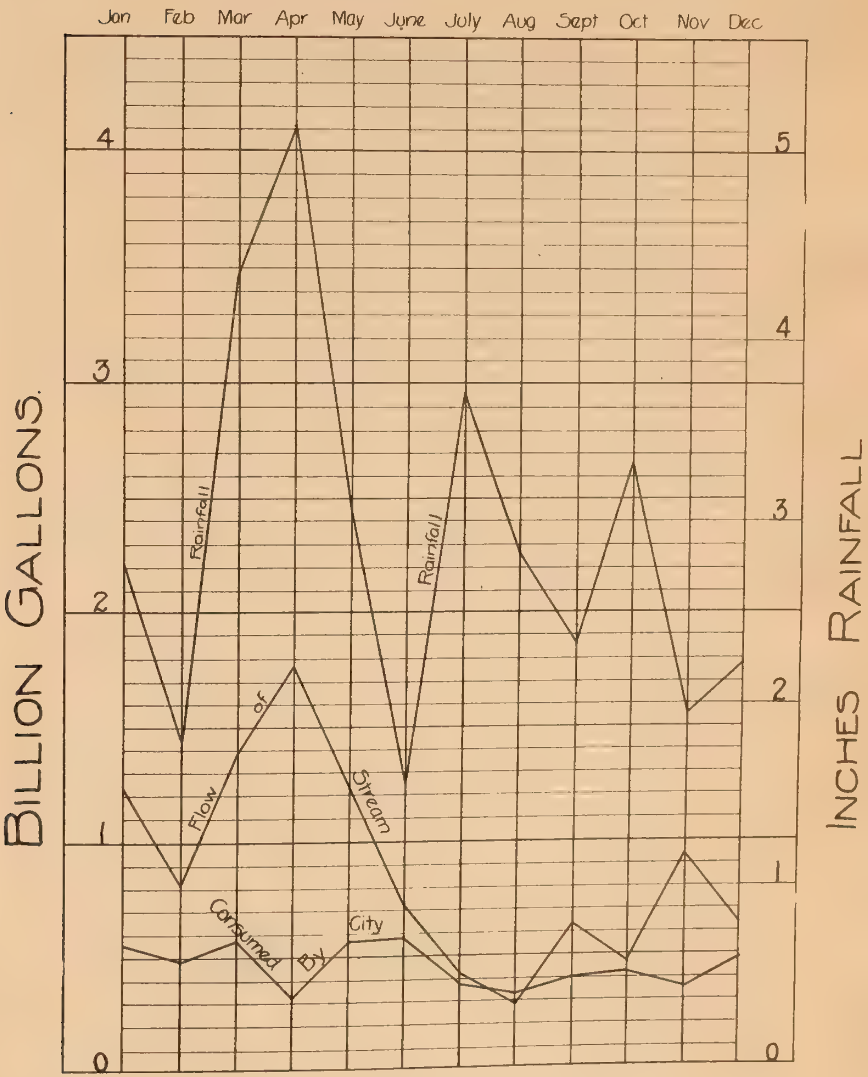
Scale $\frac{\text{Upper}}{\text{Lower}}$



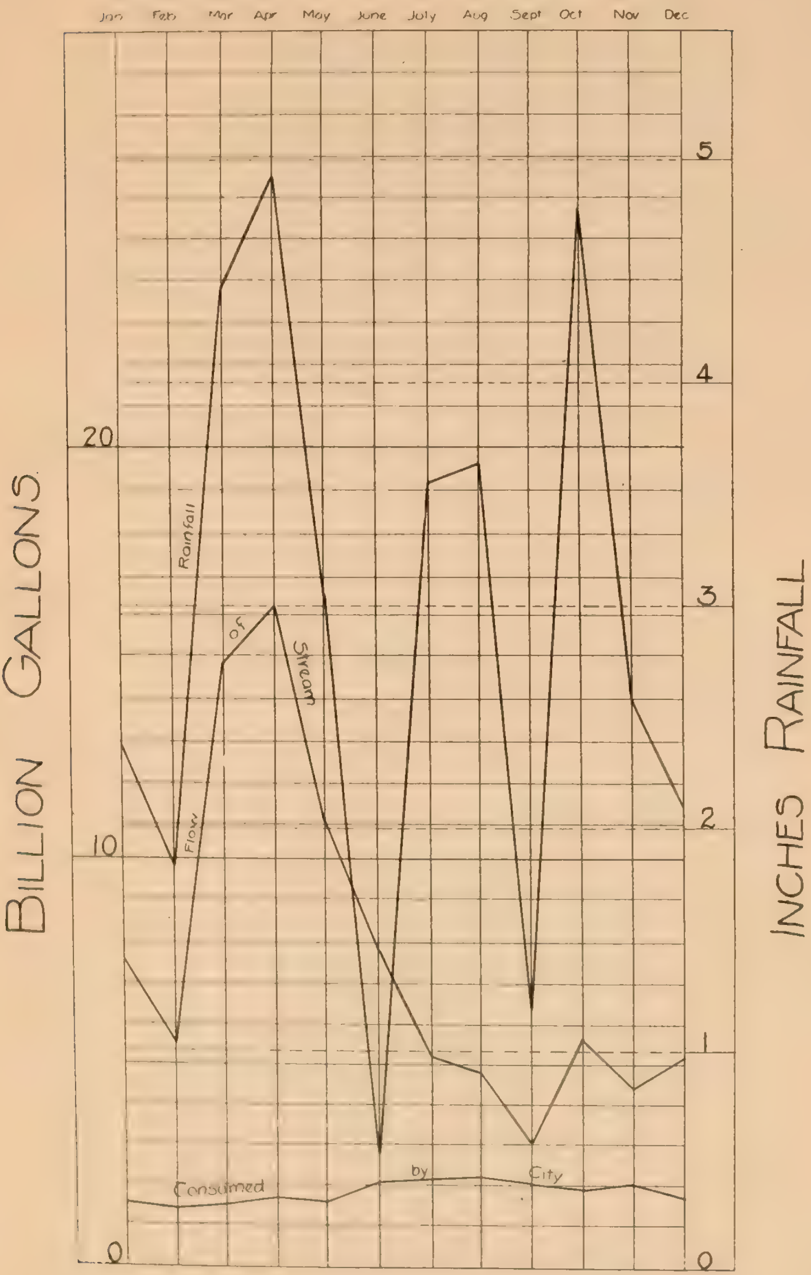
CONSUMPTION BY MONTHS-1913.



JONES FALLS SUPPLY - 1913.



GUNPOWDER SUPPLY - 1913.



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